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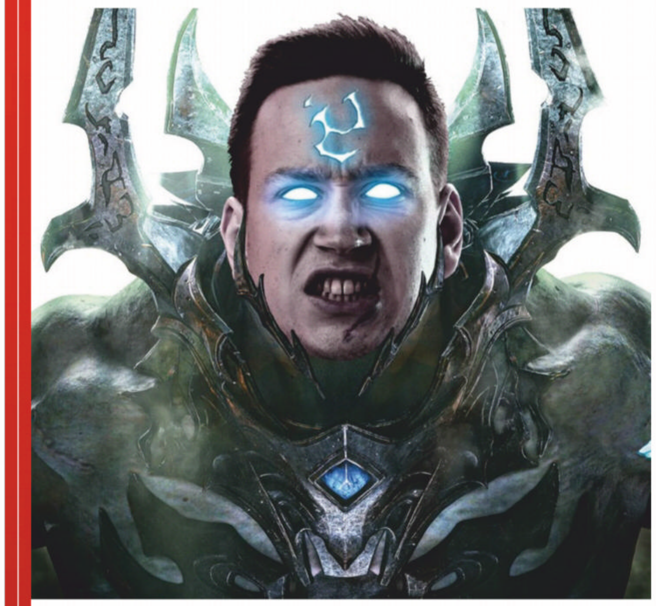
"IT'S STILL FINDING WAYS TO BREAK NEW GROUND"



World of Warcraft is more than just an institution – after over one and a half decades of enduring popularity, it's practically PC gaming bedrock at this point. Which makes it all the more amazing that it's still finding ways to break new ground.

In fact, it's breaking reality itself this year. While players may have died countless times over the course of their adventures, the *Shadowlands* expansion marks the first time they'll be able to storm the very heavens – and hells – themselves. Join us as we go behind the scenes to find out how the worlds of the dead are breathing new life into an MMO that refuses to fade away.

ROBIN VALENTINE
Specialist in
Heavenly writing and hellish opinions.
Twitter
@robinlvalentine
This month
Received a vision of the true afterlife. It's mostly queueing.

ROBIN VALENTINE
PRINT EDITOR
robin.valentine@futurenet.com

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The PC Gamer team

WES FENLON
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Loud ninjas
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This month
Delved into a corner of Twitch ruled by '80s action heroes and the Hindu god Hanuman.

RACHEL WATTS
Specialist in
Mind crimes
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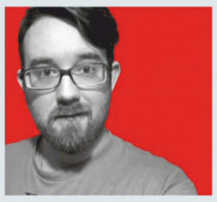
This month
Explored a world of memories in *The Signifier*, but still can't remember where she left her keys.

STEVEN MESSNER
Specialist in
Barrens chat
Twitter
@stevenmessner
This month
Put on his Writing Hat of the Tiger +4 and bashed out one hell of a *World of Warcraft* feature.



FRASER BROWN
Specialist in
Corporate slap fights
Twitter
@FraserlBrown
This month
Investigated the Epic vs Apple suit to find out who's the goodie and who's the baddie.

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CRUSADER KINGS III

A strategy epic so sprawling and chaotic that our reviewer died of stress. Er, in the game that is.

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A TOTAL WAR SAGA: TROY

Should you buy the new *Total War* game? Oh, wait, you all got it for free on the Epic store already.

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Intel had the spotlight last issue – now it's time to check out the best AMD has to offer.

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EWS | OP EVELOPMEN

Epic claims it wants to loosen Apple's grip, not make a buck.

EPIC SHOWDOWN

A cheeky change to FORTNITE on iOS has ignited a war

Epic Games is on the warpath. After introducing a payment system into *Fortnite*'s iOS version that bypassed Apple and its 30 percent fee, the battle royale was booted off the App Store. But Epic was prepared with a lawsuit, along with an in-game parody of a classic Apple advert. The same thing played out on the Google Play Store, followed by another lawsuit.

The lawsuit against Apple begins by pointing out that same 1984 ad, which it says "cast Apple as a beneficial, revolutionary force breaking IBM's monopoly over the computing technology market". Now, however, "Apple has become what it once railed against: the behemoth seeking to control markets, block competition, and stifle innovation."

Specifically, the lawsuit accuses Apple of using "anti-competitive restraints and monopolistic practices" in both the distribution of software and the processing of payments on iOS. At the same time, it notes, developers on other Apple hardware, such as Macs, are free to operate in an open market, using external stores or direct downloads, with a variety of payment options and more competitive processing fees.

The lawsuit goes into deep detail on the steps Epic believes Apple takes to maintain its hold on the market and users of its hardware, and makes ten allegations including unlawful monopoly maintenance, denial of essential facility, and unreasonable restraints of trade.

EPIC IS FIGHTING TO KEEP ACCESS TO ITS DEVELOPMENT ACCOUNTS

DEMOS FOR DAYS

STEAM GAME FESTIVAL

Valve announced that the demo-packed Steam Game Festival will be a recurring event. The festival was originally a way for developers to promote their games among the cancellation of gaming events, but has now become a permanent fixture with two more planned for 2021. ■ ***RW***

ROGUE SQUADRON

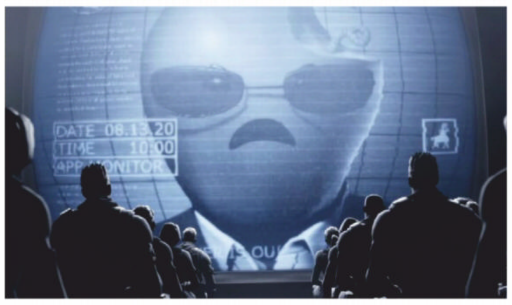
MS FLIGHT SIMULATOR

Streamers Bruce Greene and 2SoonBoon took *Microsoft Flight Simulator* realism to the next level by dressing up as pilots and making a real-time 16-hour flight from Los Angeles to Dubai. It included surprise guest pilots and a 'real action landing'. ■ ***AC***

BELOW THE BELT

INTEL VS TORVALDS

After Linux creator Linus Torvalds wished Intel's AVX-512 instruction set "a painful death", the company's chief architect, Raja Koduri, came to its defence. Koduri said "AVX-512 is a great feature" and "our customers on the data centre side really, really, really love it." Handbags! ■ ***JR***



ABOVE, TOP: Memories of happier times.

ABOVE, BOTTOM: Epic has even made a villain inspired by Apple.

Alongside this legal battle, Epic is fighting to keep access to its development accounts and iOS and Mac development tools. Apple informed the company that, as a result of Epic breaking the licence agreement, access was being revoked. This will affect more than *Fortnite*, as the Unreal Engine won't be able to support Apple platforms, creating potential problems for lots of developers.

FACE OFF

Epic filed a restraining order to retain access, accompanied by a declaration of support from Microsoft. In the first appearance in front of the judge, Epic was granted the restraining order temporarily, but Apple isn't required to put *Fortnite* back on the App Store. It has consistently called Epic's injury self-inflicted and once again offered to let *Fortnite* return if Epic stuck to the in-app payment rules. Nobody is backing down.

What's strange about this dispute is how *Fortnite* itself is being weaponised. Straight away, Epic had a campaign going, with a slick video that turned Apple into a cartoon villain, and a hashtag for fans to rally behind. There's even been a tournament, the Free Fortnite Cup, which let players duke it out for a chance to win the Apple skin from the parody ad. This is a lawsuit with good marketing.

Andy Chalk, Fraser Brown

Highs & Lows

HIGHS

Fall Guys
Mediatonic helped raise $1 million for gamers' charity SpecialEffect with a Twitter bidding war.

Untitled Goose Game
The honk-'em-up is getting a new co-op mode.

DC FanDome
WB Montreal and Rocksteady both unveiled new DC games: *Gotham Knights* (see p24) and *Suicide Squad: Kill the Justice League*.

Vampire: The Masquerade – Bloodlines 2
The game has been pushed back again, this time until 2021.

Grand Theft Auto V
Lazlow Jones, whose in-game radio shows made him the voice of *GTA*, has left Rockstar Games after two decades.

Halo Infinite
Microsoft's headliner has been delayed until next year.

LOWS

The Spy

BUT WHO WATCHES THE SPY?

The Spy has never made a mistake. You're dubious, of course, but consider: if The Spy had made a mistake – and The Spy assures you The Spy definitely has not – how would you even know? This is the benefit of anonymity. While The Spy's greatest triumphs will forever go unsung, The Spy can at least take comfort in the knowledge that The Spy's most embarrassing failures will never be known. Except The Spy can't, because, as should be clear by now, The Spy has never screwed up.

THE SPY
The Spy doth not protest too much.

Not once has The Spy spilled truth serum into a mug of tea and spent hours revealing The Spy's darkest secrets to the person The Spy was supposed to be interrogating. And The Spy always knows which of The Spy's pens is secretly a gun, and so obviously didn't lend it to a friend who *didn't* then shoot a hole in the birthday card they were writing for their grandmother.

And what of the time that an early demo of *Gods & Monsters* was leaked onto the Stadia store under the codename Orpheus long enough for the handful of Stadia users that exist in the world to download and play it? That sure was a colossal screw-up. A real primo whoopsie. Doubtless whoever did that – and it most assuredly was not The Spy posing as an overworked Google staffer in an effort to discover if the company was secretly plotting world domination – still breaks out in a cold sweat at the mere mention of Ubisoft's mythological adventure.

The Spy senses that you're doubtful, which is annoying because The Spy is actively denying these charges. Fine, have it your way, The Spy can prove it. The Spy is in the middle of reporting on the latest rumours around *Gods & Monsters* – The Spy admits this may not have been obvious yet – and is doing so calmly, and with a steady hand. It's fine. It's all fine. Everything is... fine. The Spy definitely doesn't need a lie down, but is going to have one anyway for normal reasons.

The Spy is back from a deep, restful sleep. The Spy does not need a shot of brandy. The Spy is making it through this easily, and does not need a hug.

RISING FROM THE ASHES

Gods & Monsters then, is no longer called '*Gods & Monsters*', which is useful because it means The Spy can stop typing that name – not that The Spy minds, you understand. This was already known: back in June, Ubisoft referred to it as "the game formerly known as *Gods & Monsters*" in an interview for Kotaku about... a subject which The Spy will no longer be discussing. Now, though, we have a likely candidate for its new name – *Immortal Fenyx Rising*.

That's the title of a game recently rated by the Taiwan Digital Game Rating Committee. The Ubisoft connection here is obvious: the protagonist of *that* game is called Fenyx. And while The Spy would point out that *Immortal Fenyx Rising* is an obviously terrible name, that's never stopped a videogame publisher in the past.

Most likely we'll see the official reveal of *Immortal Fenyx Rising* at the next Ubisoft Forward event, which is slated for an unknown date in September. Given that this magazine is also set to publish in September, there's a chance it will have already happened when you read this. If that's the case, consider this The Spy's first mistake. Spy out. ■

The Spy

> THE SPY WOULD POINT OUT THAT IMMORTAL FENYX RISING IS AN OBVIOUSLY TERRIBLE NAME

This month in... 2010

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BEYOND THE SEA

1 Before the critical acclaim, the backlash, the backlash to the backlash, and the nuanced, albeit oft-critical reappraisal, Craig Pearson gets an early look at Irrational's follow-up to their underwater immersive sim. Notably, this version is almost nothing like the game as was released, because *BioShock Infinite*'s development process was clearly *wild*.

ISSUE
219, November 2010

ON THE COVER
Guild Wars 2

IN THE CINEMAS
Harry Potter and the Deathly Hallows – Part 1

2 Reviews focused on solid, albeit unremarkable fare. *Puzzle Quest 2*! *F1 2011*! *Ruse*! Just be glad that, despite the fuck-show that is 2020, we've got *Crusader Kings III*.

Special Report
Gamescom is bigger than Glastonbury
MONITOR

3 In 2018, a rumour went around that someone had shit in a bag while waiting in line at Gamescom's *Fortnite* stand. The fact it wasn't true is beside the point. The fact people thought it could be true says everything you need to know about Gamescom. This issue's Special Report on Gamescom predates that by eight years, but the story is still worth telling.

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It's not all about the B-movies. There are good ones in this collection, too!

TWITCH PLAYS VHS

Streamer FORGOTTEN_VCR turns '80s found footage into mixtapes

Ninjas, Japan's historical hitmen, were originally meant to be stealthy assassins, striking in the night and then disappearing into the shadows. I'm not sure what changed between 12th century Japan and 1980s Hong Kong, but by the time cult movie director Godfrey Ho was through with ninjas, they were white guys wearing bright red and yellow Halloween costumes, racing to the top of mountains and bellowing "NINJAAAA" into the sky. That's one of many bizarre, hilarious scenes that pops up again and again like a meme in the mixtapes of Forgotten_VCR, a Twitch channel that mostly eschews videogames in favour of pulp cinema streamed from actual VHS tapes three nights a week.

The Forgotten_VCR Twitch channel started as a convenient way for the streamer, who has asked me to refer to him with the simple nickname 'VCR', to watch video tapes at his desk – he's currently a university professor by day – without hauling the hardware into his office. "I thought it sounded like a *Metal Gear*-y name for what I was doing," he says. "I did that for a couple months and then people started tuning in."

VCR tested the waters with a compilation of toy commercials he'd play on Saturday mornings, and then in mid-2019, he started making mixtapes, cutting together absurd scenes from infamously bad ninja movies, '80s tech commercials, wrestling, super sentai, and other oddities lurking in his tape collection. A year later he's made more than 50, and 200-300 viewers will tune in on a Sunday night eager to see a new tape played live.

"It's kind of a gimmick, if I'm going to be totally honest," he says. "But here's the thing: if it's a video file in Adobe Premiere, why are you tuning into me? Why aren't I just posting this on YouTube? When I have this VCR and you hear it and see the little icon that says 'play' and 'stop' and all that, it immediately makes it feel like 'I have to be here. This is on a tape'. It's part of the look of the stream."

ON THE RECORD

That real hardware is an essential part of Forgotten_VCR's retro, underground vibe. But it's also a key part of why and how he makes these mixtapes to begin with, which he also did in college in the early 2000s.

"The one that I always tell people that I saw way before YouTube was Winnebago Man. That ended pretty much every compilation tape we'd get at the university I attended," he explains. "There were a few video artists like Derrick Beckles who made this whole series called TV Carnage, where he would juxtapose footage to try to tell a story and completely pervert things. I remember

Press REC

Forgotten_VCR's Patreon grants access to a Discord where fans do something rare in the insular found footage hobby: share. "People can be really guarded and protective. I think that's stupid, because we don't own any of this stuff," he says. He gives a list of movies in each mix to superstar mod The_Outsider, who maintains a master spreadsheet with links to YouTube or Archive.org.

BLOND, BEAUTIFUL, AND DEADLY.
CYNTHIA ROTHROCK is
CHINA O'BRIEN
Breathing Fire
MAGNIFICENT BODYGUARDS
EXCESSIVE FORCE II
TOUGH AND DEADLY
JUSTICE
SHAOLIN

LEFT: '90s action star Cynthia Rothrock has recently become a popular character on the stream.

DRAMATIS PERSONAE *The recurring stars of the Forgotten_VCR mixtapeverse*

MARY
She looks innocent, but evolving lore suggests Mary may be secretly evil. Probably because of her hair.

HANUMAN
Deity turned building-sized super sentai warrior. You can catch him palling around with Kamen Rider.

HARRY
Actor Richard Harrison famously starred in many of Godfrey Ho's ultra low budget ninja movies.

NINJAS
You can always tell they're ninjas because their headbands rather handily say 'Ninja' on them.

finding that really appealing. He wasn't just putting things together in a compilation. He was trying to subvert what you were expecting."

When he got the idea to start making tapes for Twitch, VCR went out and bought a couple Panasonic tape decks and a mixer, nearly the same setup he had in college. He does video editing in Premiere as a side job to teaching, but working on tape forces him to keep things simple instead of editing over cuts. He'll put movies on while he works, and when something catches his attention – usually a fight scene – he'll rewind, slap a post-it note on it, and add it to the pile for a potential mixtape.

As he's gained a devoted following, the tapes have grown increasingly elaborate. His fans are building lore around actors who pop up in multiple movies, turning them into characters with imagined motivations and backstories. "That encourages me to look for footage that matches this story that they've made up," he says. "I've managed to take a centuries-old Indian god named Hanuman and turned him into the weirdest meme of my channel. He's this ape human, and there are all these stories of him saving the Indian people and being this hero. I purposefully edited footage of him just doing horrendous violence to people and now everyone in my chat is scared of Hanuman and talks about how disgusting and violent he is and how he'll just murder you. There are plenty of clips of Hanuman playing with children and patting them on the head and being very nice. But I've never shown any of that footage, because everyone's created this lore of Hanuman being this horrible person."

AS HE'S GAINED A FOLLOWING, THE TAPES HAVE GROWN INCREASINGLY ELABORATE

Even 50 mixtapes in, VCR has barely made a dent in his library. He started collecting in high school, where his local comic shop sold bootleg anime and the Korean deli next door also happened to rent out tapes – primarily Asian movies, dubbed into English, with Chinese subtitles. "Eventually VHS just became uncool, and it was really easy to acquire them," he says. "You just tell people that you collect tapes and they'll just hand them to you."

The money from Twitch streaming has allowed him to hunt for obscure movies on Yahoo! Auctions to add more scenes with stars his audience adores, like martial artist Cynthia Rothrock, and stuff they'd otherwise never know about, like movies from Thailand and Malaysia. It's also proven to be a surprising source for new side gigs – because of Forgotten_VCR, he's started cutting music videos for vaporwave musicians.

"I have two kids, a mortgage, college debt and all that, so I had to take video gigs I didn't really want to take to make money," he says. "Now the money I make from the stream has replaced a lot of the bullshit I don't want to do. So I always tell my audience one of the best things they gave me was the ability to say 'no' to things that I don't feel like are very creatively stimulating. Why would I take that money for that job when I could do something that I really, really love?" ■

Wes Fenlon

Positive Influence

INSPIRATIONS AND CONNECTIONS IN GAMES

A NEW FRONTIER

Arkane's founder is reworking the immersive sim for WEIRD WEST

The story of Raphaël Colantonio and Arkane, the studio he founded, is well told. But there's one episode that he recounts less often. While working for EA in Guildford, England, he interviewed for Richard Garriott – an RPG legend, and a personal hero.

"My English was pretty bad back then," he recalls. "Probably half of the things I said were just wrong." But Colantonio's passion for the games of Origin Systems came across, and he got the job. He'd be working on the next *Ultima*. Just as soon as the studio co-signed his contract.

"They started to drag their feet," Colantonio says. "Back then, Richard was complicated to get hold of. I was trying to call him, and panicking." A month later, news filtered through to Guildford: EA was shutting the studio down. "That's how I knew I was not hired."

Despite the setback, Origin's example shaped Colantonio's career, defining the spirit and values of Arkane. And now that Colantonio has gone independent, Garriott looms larger than ever: *Ultima VII* is the primary inspiration for *Weird West*, an isometric immersive sim.

"When we did *Arx Fatalis* [at Arkane], it was the Looking Glass and *Ultima Underworld* version of those values, that looks like a first-person shooter," Colantonio says. "Whereas this time, it's the Origin and *Ultima VII* version, more tactical and top-down."

It's almost eerie how closely Colantonio's formative influences echo those of a former Positive Influence guest, Larian Studios' Swen Vincke. While one is famous for immersive sims, the other RPGs, the principles they both cling to are the same. There's a shared physicality to their worlds, a sense of coherence and possibility. A dedication to rewarding players for finding unusual solutions to their problems. "I can see how we overlap," Colantonio says. "When I played *Divinity: Original Sin*, I felt I was having a conversation with developers I've never met. They tried to convey, and honour, and celebrate *Ultima VII*. I felt like, 'I see what you're doing here. Me too.'"

NUCLEAR FAMILY

With its isometric perspective, *Weird West* is the most strikingly *Ultima*-esque game of Colantonio's career. But that's not Wolfeye Studios' only RPG touchpoint: the studio is referring back to the very first *Fallout*, too.

"It's a game that's not faking it," Colantonio says. "If there's a door, there's a key to that door. If there's a key to that door, it's somewhere in the world. It's maybe on a character that owns the place. It all makes sense, as opposed to a fake building with an invulnerable NPC in front of it who's waiting to give you a quest."

Rather than double down on dialogue, stats, and spells, however, *Weird West* draws on Arkane's action experience by, well, drawing pistols. "We have a few younger generation action gamers in the team," Colantonio says.

Ultimately, this game belongs to the same genre as *Arx Fatalis* and *Dark Messiah*. Colantonio thinks that immersive sims are like wine, in that enthusiasts debate what makes the perfect batch. The simile holds true in another way: the ideas in immersive sims have aged well.

"Back then we didn't have the technology to support how far we wanted to go," Colantonio says. "Simulation is expensive when it comes to computation. You can extract what's interesting about [old immersive sims], repurpose them and repackage them. It's still super relevant."

Wolfeye itself is a fascinating blend of old and new immersive sim fans. Its CEO, Julien Roby, was Colantonio's "very, very young" assistant back on Arkane's first game 20 years ago. Now, the pair preside over a new generation of developers whose relative inexperience is more than made up for by a passion for building authentic worlds. Like Colantonio in his first meeting with Garriott, they've shown they care about the values that have resulted in games like *Ultima VII* and *Dishonored*. "They were attracted to Wolfeye because of where Julien and I come from," Colantonio says. "Our company was like a beacon for people who love immersive sims. It's the best of both worlds – it's not like they're going to be contrarian to our values, but they say, 'How about we do things this way?'" ■

Jeremy Peel

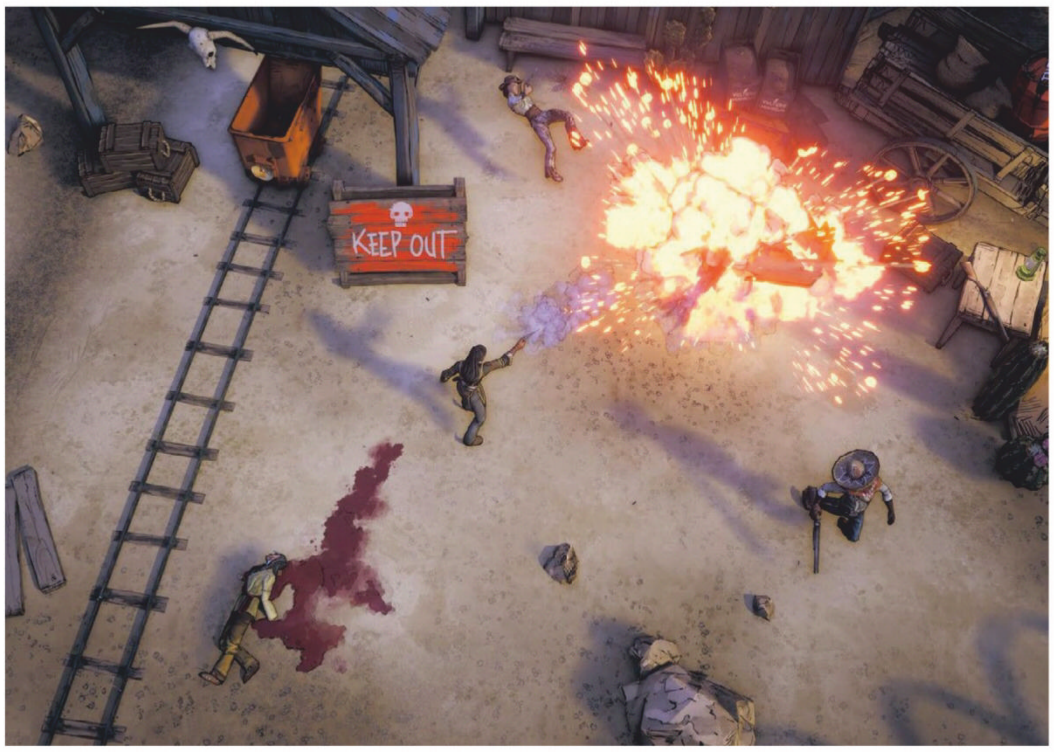
GHOST TOWN *The rest of the weird west in games*

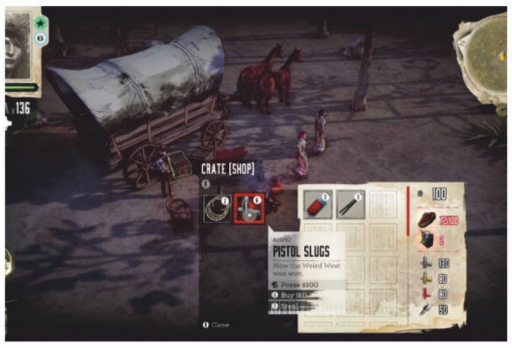
ODDWORLD: STRANGER'S WRATH
Lorne Lanning broke away from platformers with this western shooter. But *Oddworld*'s offbeat character is everywhere in *Stranger's Wrath*.

CALL OF JUAREZ: GUNSLINGER
This first-person shooter might appear like a straightforward western, but it has a woozy grip on reality thanks to its unreliable narrator.

HARD WEST
An *XCOM*-alike set in a west muddied by demons, satanic cults, psychics, and more. It's true to the cinematic genre, though: you can spot enemies by their long shadows.

> “BACK THEN WE DIDN’T HAVE THE TECHNOLOGY TO SUPPORT HOW FAR WE WANTED TO GO”




CRATE [SHOP]
PISTOL SLUGS

LEFT: Younger team members have updated Colantonio’s approach to UI.

FAR LEFT: It’s not an immersive sim without volatile explosives just lying around.

DNA Tracing

GAMING'S LINEAGES

IN THE FULLNESS OF TIME HE WOULD GO ON TO RESHAPE THE BUSINESS

TWICE AS NICE

How Tim Schafer made DOUBLE FINE a creative hotbed

In 1997, John Romero was driving around the US handing out blank cheques to some of the country's greatest game designers. To Tom Hall, his old *Doom* comrade, he gave penthouse space in Dallas to make the brilliant JRPG *Anachronox*. For Warren Spector, he funded an office full of immersive sim nerds in Austin who went on to create *Deus Ex*. And in San Francisco, he approached Tim Schafer to make a point-and-click adventure under the auspices of Ion Storm.

Schafer, however, wasn't ready to leave LucasArts, the company that had given him access to Skywalker Ranch, and to his mentor, *Monkey Island*'s Ron Gilbert. He turned Romero down. It's a decision that might have suggested a lack of entrepreneurial spirit; that Schafer was 'just' a designer and writer, not a studio head. No shame in that. In the fullness of time, however, he would go on to reshape the business of games more than once with his own company, Double Fine.

At LucasArts, Schafer's games were distinguished by their worldbuilding. Though he couldn't quite match Gilbert for puzzle design – his mentor's thematically satisfying solutions would prove to be the best of the point-and-click genre – Schafer's brain was wired to splice his unusual influences in creative ways. An overheard story in an Alaskan biker bar led to *Full Throttle*, which swapped the adventure genre's weedy protagonists for a straight-ahead brawler. *Grim Fandango* blended film noir with Día de Muertos, hot rod culture, and underworld bureaucracy – a heady mix in a game intended for the mainstream.

SKY BOX

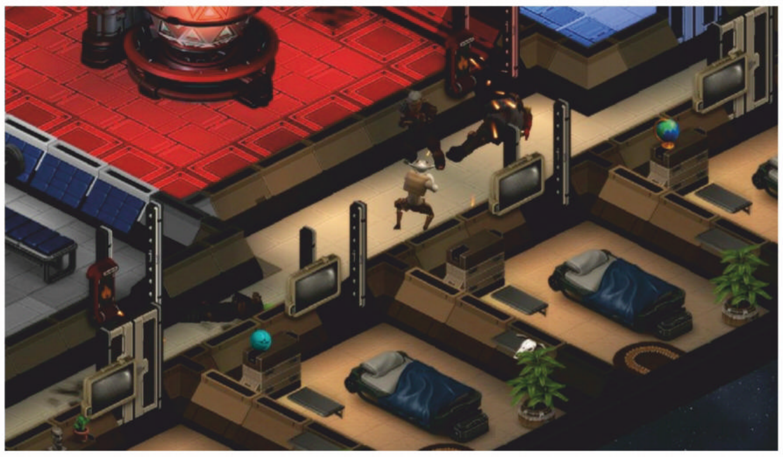
Schafer's worlds were like nobody else's, and when he did step away from LucasArts to form his own studio – named after the 'double fine zone' on the Golden Gate Bridge – that imagination was the key draw. *Psychonauts* was inspired by a rhetorical question – "What colour is the sky in your world?" – and depicted the brains of its characters as playable levels.

The results are still breathtaking examples of character-driven design. A mid-century minimalist cube stood in for the head of repressed researcher Sasha Nein, where buried emotions threatened to burst violently to the surface. And a constant psychedelic '60s party grooved inside the mind of glamorous agent Milla Vodello – a distraction from the children she wasn't able to save from a traumatic accident.

Brütal Legend, the follow up, was no less ambitious – bringing heavy metal vinyl covers to life in a fantasy landscape torn apart by warring musical subcultures: the Black Sabbath headbangers scrapping with Marilyn Manson demons and Type O Negative goths. The metal community recognised itself in the game and rallied behind it: rock stars Ozzy, Lemmy, and Rob Halford, and of course, Jack Black all had starring roles.

By then, common themes were revealing themselves in Schafer's work – roaring motors, powerful women, and mental illness. The studio was, at that time, just like one of *Psychonauts*' levels – a physical manifestation of Schafer's brain and every idea that passed through it. But what followed would smash it apart, in the best way possible.

BOTTOM: *Spacebase DF-9* was controversially cancelled during early access.



PROTO ATYPICAL

Amnesia Fortnight's best playable pitches

HACK 'N' SLASH

Hit an enemy with your sword and you can reprogramme its health to zero. Weirdly better than the full game it grew into, which requires a Computer Science degree to get into.

AUTONOMOUS

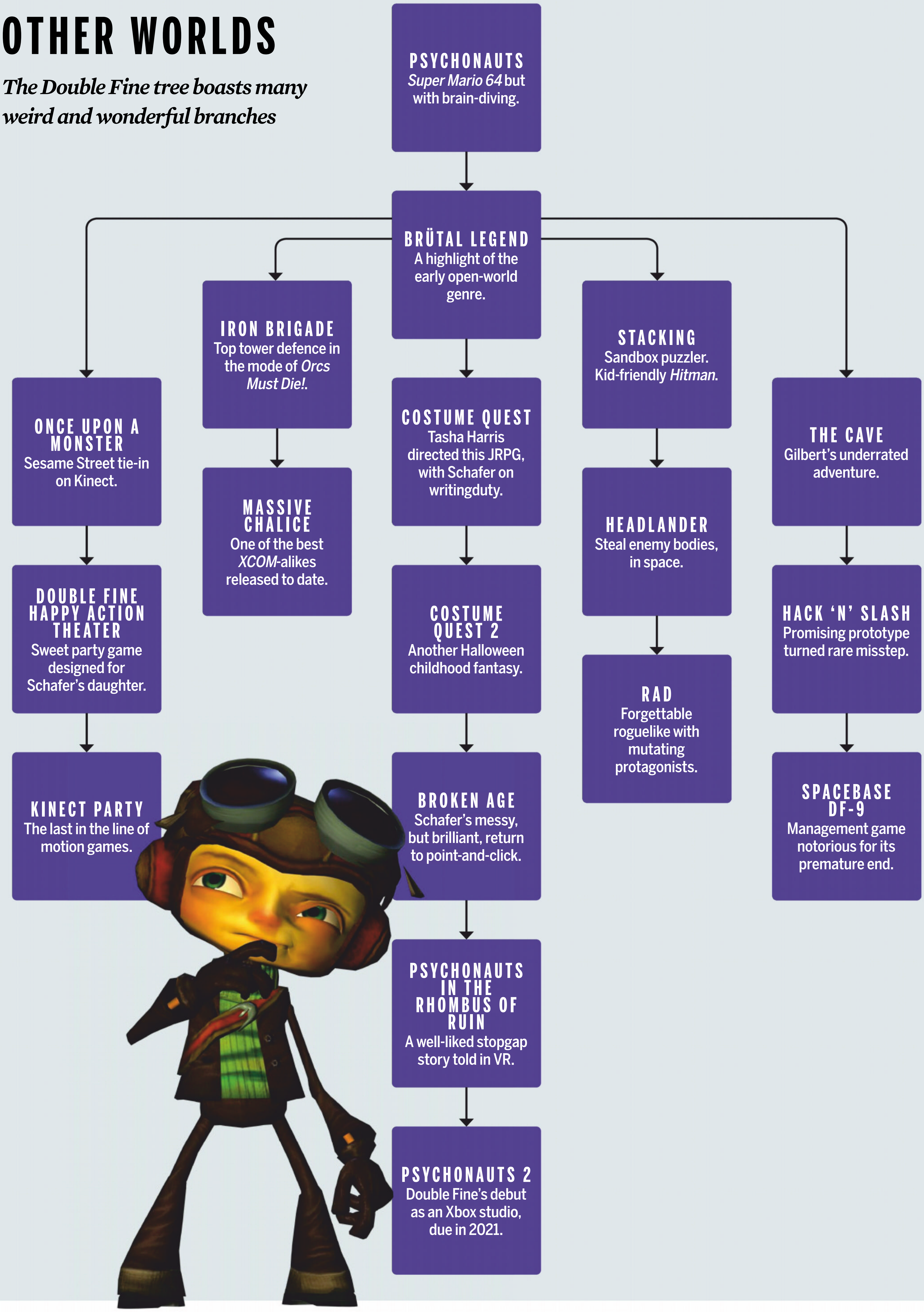
Build robots from found parts in this first-person sandbox game from *Stacking* designer Lee Petty. Eventually expanded for the Leap Motion hand-tracking controller.

LITTLE PINK BEST BUDS

Adventure Time creator Pendleton Ward led development on this comedy experiment about tiny homunculi who yell at you to be their best friend.

OTHER WORLDS

The Double Fine tree boasts many weird and wonderful branches



PSYCHONAUTS
Super Mario 64 but with brain-diving.

BRÜTAL LEGEND
A highlight of the early open-world genre.

ONCE UPON A MONSTER
Sesame Street tie-in on Kinect.

DOUBLE FINE HAPPY ACTION THEATER
Sweet party game designed for Schafer's daughter.

KINECT PARTY
The last in the line of motion games.

IRON BRIGADE
Top tower defence in the mode of *Orcs Must Die!*.

MASSIVE CHALICE
One of the best *XCOM*-alikes released to date.

COSTUME QUEST
Tasha Harris directed this JRPG, with Schafer on writingduty.

COSTUME QUEST 2
Another Halloween childhood fantasy.

BROKEN AGE
Schafer's messy, but brilliant, return to point-and-click.

PSYCHONAUTS IN THE RHOMBUS OF RUIN
A well-liked stopgap story told in VR.

PSYCHONAUTS 2
Double Fine's debut as an Xbox studio, due in 2021.

STACKING
Sandbox puzzler. Kid-friendly *Hitman*.

HEADLANDER
Steal enemy bodies, in space.

RAD
Forgettable roguelike with mutating protagonists.

THE CAVE
Gilbert's underrated adventure.

HACK 'N' SLASH
Promising prototype turned rare misstep.

SPACEBASE DF-9
Management game notorious for its premature end.

BREAK UP

The backdrop to Double Fine's early years had been the rise of the Xbox 360 and PS3, powerful consoles that demanded games of huge scale and detail, created by teams in the hundreds. AAA development was consequently becoming the preserve of a handful of top studios, and while the indie scene was booming, the middle ground was squeezed. Famous contractors like Double Fine, based in US cities with a high cost of living, were struggling from project to project – and when EA passed on a *Brütal Legend 2*, closure was a real prospect.

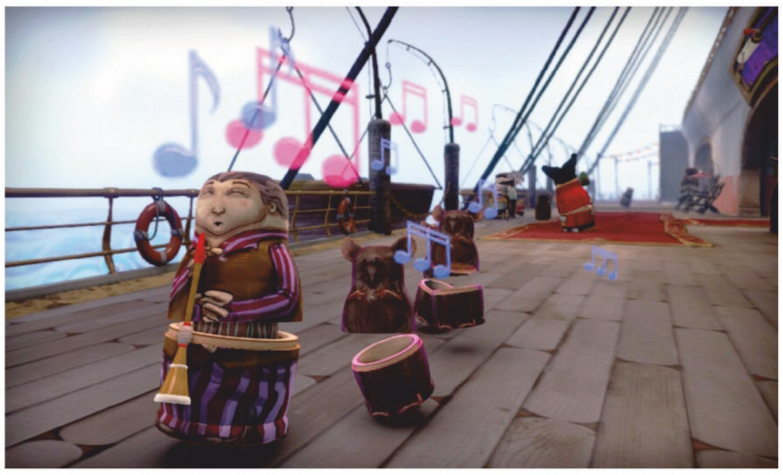
Instead, the studio made the decision to split its team into four. By building smaller games, each with their own budgets, it could occupy all of its staff – and stood a better prospect of surviving the cancellation of any one project.

The split had a positive effect on Double Fine's creative culture. It prevented the studio from falling into the 'auteur' trap of fellow studios with distinctive and popular leaders – allowing other talented developers to step out from under the shadow of Schafer.

One was Brad Muir, game designer on *Brütal Legend*, who took that game's action-RTS hybrid and made *Iron Brigade*, a frantic tower-defence shooter about mobile Great War trenches. His direction brought a tactical bent and mechanical focus to Double Fine that culminated in *Massive Chalice*, an eerie and brutal *XCOM*-alike. Muir's handiwork can now be seen in Valve's most strategic games, *Artifact* and *Dota Underlords*.

HEAVY PETTY

Another emerging leader was artist Lee Petty. Where Schafer had distanced himself from point-and-click, embracing 3D action that would never have flown at LucasArts' adventure division, Petty sought to reconfigure the genre for a new age. *Stacking* cast players as a Russian doll who could hop into other dolls and use their unique abilities to solve puzzles – each character a 'verb' akin to *Monkey Island*'s 'push' or 'pull'. Petty revisited the idea for *Headlander*, a sci-fi metroidvania.



LEFT: The clack of wooden halves coming together lives long in the memory of *Stacking* players.

Schafer's writing – both sharp and kind – has continued on in *Costume Quest* and *Broken Age*. But the new company structure has allowed others to shine simultaneously, even giving a temporary home to Ron Gilbert for adventure-platformer *The Cave*.

Over the last decade, the game jam process that birthed *Iron Brigade* and *Stacking* has become public, with fans voting on pitches that have since entered full production at Double Fine. In fact, the studio has become one of the most exposed in the world, its every step and stumble filmed in documentaries by the marvellous 2 Player Productions. The scrutiny has been hard on staff, but it's also saved them from misunderstandings: when Double Fine became the first high profile studio to crowdfund a game, then overscoped and decided to split *Broken Age* into two parts, fans who'd watched its difficult conception understood and accepted the delay.

It's splitting things, ultimately, that's shaped Double Fine and its reputation. Only fitting for a company with a two-headed baby as its logo. ■

Jeremy Peel

THE STUDIO HAS BECOME ONE OF THE MOST EXPOSED IN THE WORLD

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RELEASE	DEVELOPER	PUBLISHER	LINK
2021	Warner Bros Interactive	In-house	gothamknightsgame.com

GOTHAM KNIGHTS

A new Batman game – but without Batman

Batman is back! Sort of! He's in the game, but it seems he only pops in long enough to record a message saying that he's dead. Rather than this resulting in the shortest adventure ever, it acts as a cue for four of his costumed pals to take centre stage.

FIRST LOOK

A Gotham game without Batman is a bold move, but that's not the only departure from what's come before. While this seems on the surface to be a new entry in the *Arkham* series – Bruce Wayne destroying the Batcave would follow on from *Arkham Knight*, and the four main protagonists were all (briefly) playable in the same game via DLC – this takes place in an alternate universe. The reveal trailer hints at this with the revelation that Jim Gordon is dead, although we don't yet know how, when… or why.

The '*Knights*' of the title are Batman's allies. It should be no surprise, considering the fact that he went through sidekicks with all the love and care of a lion going through antelopes, that three of them are basically Robin. Tim Drake is the most recent addition to the conveyor belt of Robins, and is the one currently sporting the natty red and yellow costume.

Dick Grayson, the first Robin, flew the nest to become Nightwing. Celebrating his newfound freedom with a black and blue motif, he took to hitting people in the face with Escrima sticks.Mostly people who deserve it. With Bruce gone, he's now the oldest of the group.

Jason Todd is another ex-Robin, and it'll be interesting to see what his character adds to gameplay and story. Going by the name of Red Hood, he's a rather angry and moody chap. Considering the fact that he was *literally killed* (by the Joker) but then got better, we suppose that's understandable. While he uses a pair of pistols, it seems fair to assume that you won't be able to simply blast your way through to the ending; but he'll certainly add some variety to proceedings.

BAT'S OFF

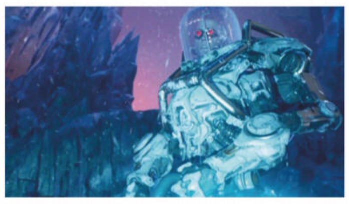
The final member of the gang is Barbara Gordon, AKA Batgirl. It seems she'll offer the most familiar experience for Batfans, as we've already seen her grapple onto surfaces, use her cape to glide through the air, and use bats in the middle of a fight (the mammals, not the sporting implements). Nonetheless, this is set to be anything but more of the same.

One of the most distinctive features of the *Arkham* series is its rhythmic combat, encouraging you to keep the flow going with perfectly timed strikes, dodges, counters and use of weapons. That's been swapped out for a slightly faster and more theatrical system here, with plenty of rapid hits and special moves (some of which are apparently gauge-dependent). There are still rewards for tactics and timing – at one point, we see Batgirl trick one enemy into shooting another – but it's a whole new system to learn.

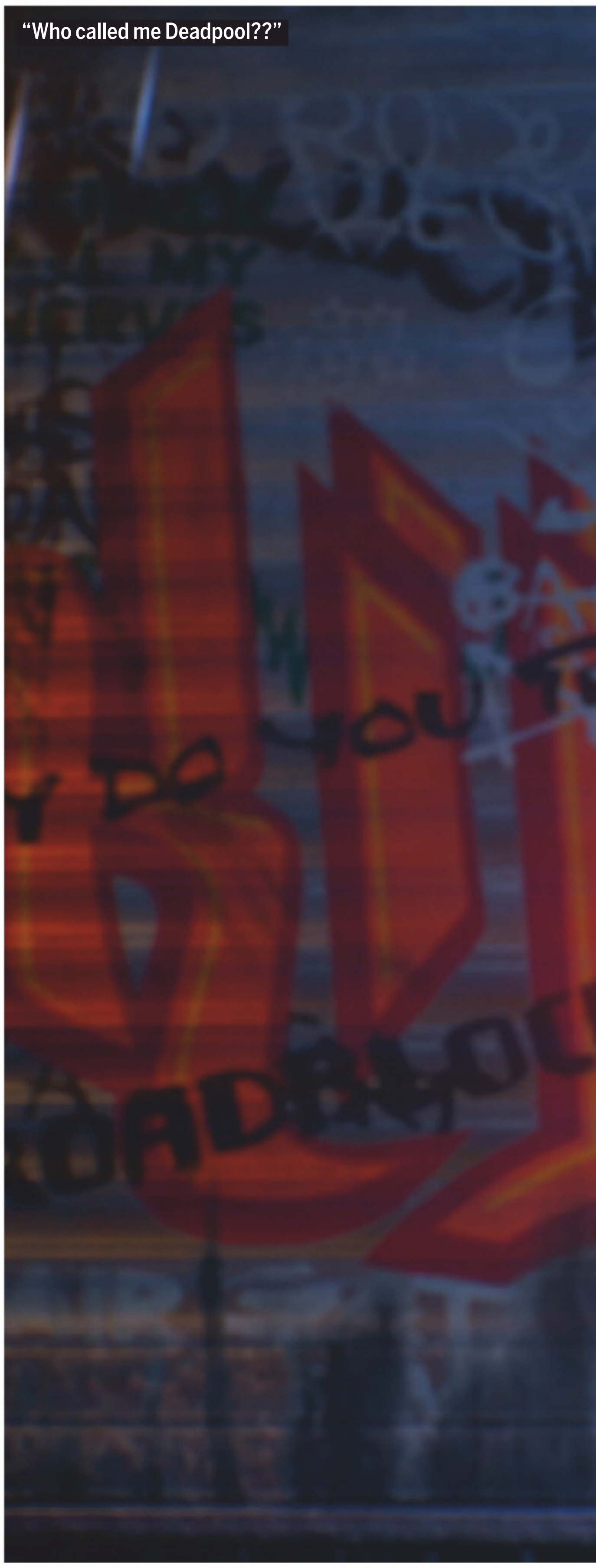
You don't have to go it alone, either. Although the whole game can be played solo, it's also possible to kick bad guy behinds alongside a second player. Combo moves, another echo from the *Arkham* series, are possible whereby you can throw an enemy your friend's way for them to finish off. Even so, it'll be nice just to have some backup for a change.

Although there's a comic series by the name of Gotham Knights, this isn't a direct adaptation. That said, they do share some elements. The Batcave may have gone boom, but Batman has left the Knights the Belfry as a base of operations. This is in the Old Wayne Tower. Interestingly, in the comics, the Belfry includes a training room by the name of the Mud Room, which uses bits of the shapeshifting supervillain Clayface to simulate situations and people. Could this be a training and tutorial area for the game?

IT'S ALSO POSSIBLE TO KICK BAD GUY BEHINDS ALONGSIDE A SECOND PLAYER



Hee hee hee.



"Who called me Deadpool??"

FREEZE OF USE

Most villain details remain under wraps, but a Mr Freeze storyline and boss fight has been revealed. He's seized control of the weather to freeze the city, so it's up to the Knights to fix the atmosphere so everything can get back to normal.

This boss fight in particular was used to highlight another difference to the *Arkham* games – RPG-lite elements. The Knights and their gear will grow more powerful throughout the game, and enemies will level up alongside them. Higher-level enemies won't just become bullet (and punch) sponges; players are promised different attacks and behaviours from them.

The developer made a brief but telling reference to different loadouts, suggesting that gear and weapon selection (and upgrading) may be more important than available footage indicates. Indeed, we spotted that fallen enemies appear to drop materials of some kind. Would this be used to upgrade armour? Weapons? Both?

As part of his posthumous chat, Bruce tells the Knights that while there's tech in the Belfry, it's "outdated". This seemingly throwaway comment may be an indication that the gang will need to invest a lot of time into upgrades if they want to succeed. Alfred survived (escaped?) Bruce's slightly disturbing decision to blow himself up, so perhaps he'll offer help beyond the already confirmed radio communication during missions.

RPG WHIZZ

The RPG stylings mean that players will have to shake off any *Arkham*-related expectations when it comes to aesthetics. Enemy designs are, admittedly, somewhat familiar; and the environment design is typically wonderful. However, each has a number hovering above their head to indicate their level, and bad guys shoot numbers out of their bodies when you give them a beating. It's another reminder that *Gotham Knights* is its own game.

Elsewhere, the rumours of a Court of Owls game proved to be true. Well, partially true, at least; the Court appears to play an important part here, but they're not the sole focus. Not familiar with who or what the Court of Owls is? I'm happy to geek out with a brief explanation.

In Gotham, the Court of Owls is an urban myth – or, at least, so some believe. Centuries old, it's a debauched and secretive society of rich Gotham families, pulling the most important strings from the shadows. The rhyme spoken during the reveal trailer is an in-universe nursery rhyme, part story, part warning. "Speak not a whispered word about them, or they'll send the Talon for your head."

The Talons are the army of the Court, undead assassins that are fast and powerful, and all signs point to the Knights having to face them during their journey.

BAD GUYS SHOOT NUMBERS OUT OF THEIR BOIDES WHEN YOU GIVE THEM A BEATING

OWL BE BACK

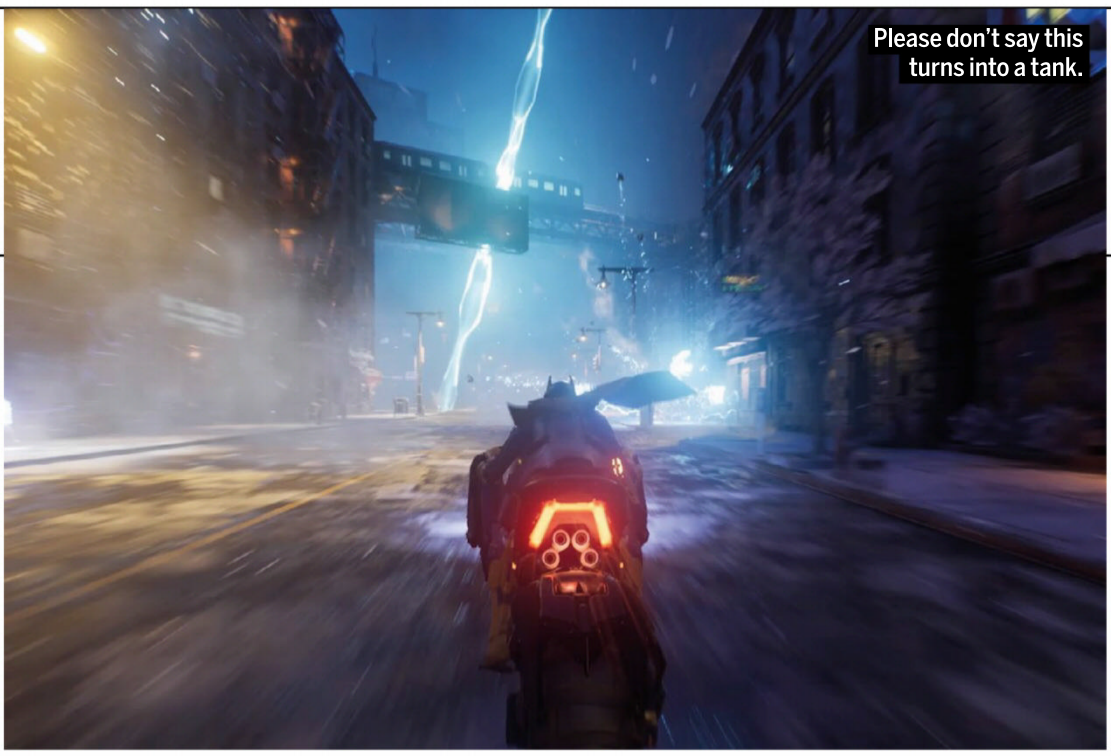
Despite the wealth of information still to come, then, it's already clear that the Knights will have their work cut out for them. Just as well they have some interesting tricks up their sleeves. Robin can teleport. Yes, teleport. This has something to do with satellites, but... who cares? Teleportation! Judging by what we've seen so far, though, its use may be limited to outdoor areas.

As if instantaneously moving from one instance of spacetime to another wasn't enough, Robin can also turn invisible. Again, there are bound to be some pretty severe restrictions involved, but he's not the dull sidekick some interpretations of him have arguably been. We're sure the other three have skills yet to be revealed. Warner seems keen to highlight Batgirl's hacking credentials, for example.

This Gotham is presented in a familiar open-world manner, and is split into five boroughs. Doubtless a large map, so the Batcycle is on hand to get around in a swift and cool manner. We've only seen Batgirl ride it, but she'll surely let the others have a go. As you'd expect, you can take out your frustration on random street thugs in between the bombastic supervillain fights, helping you level up and practice your moves. Take a friend along, and you can terrorise lowlifes in tandem.

Gotham Knights is a bit of an odd beast, in that it's strongly reminiscent of the *Arkham* series while confidently pushing forward brand new ideas of its own. So far, it looks like it just might work. Gotham is one of the very few cities in games we'll happily return to again and again, and seeing it from a new perspective – from four new perspectives, in fact – is an even better idea than Shark Repellent Bat Spray.

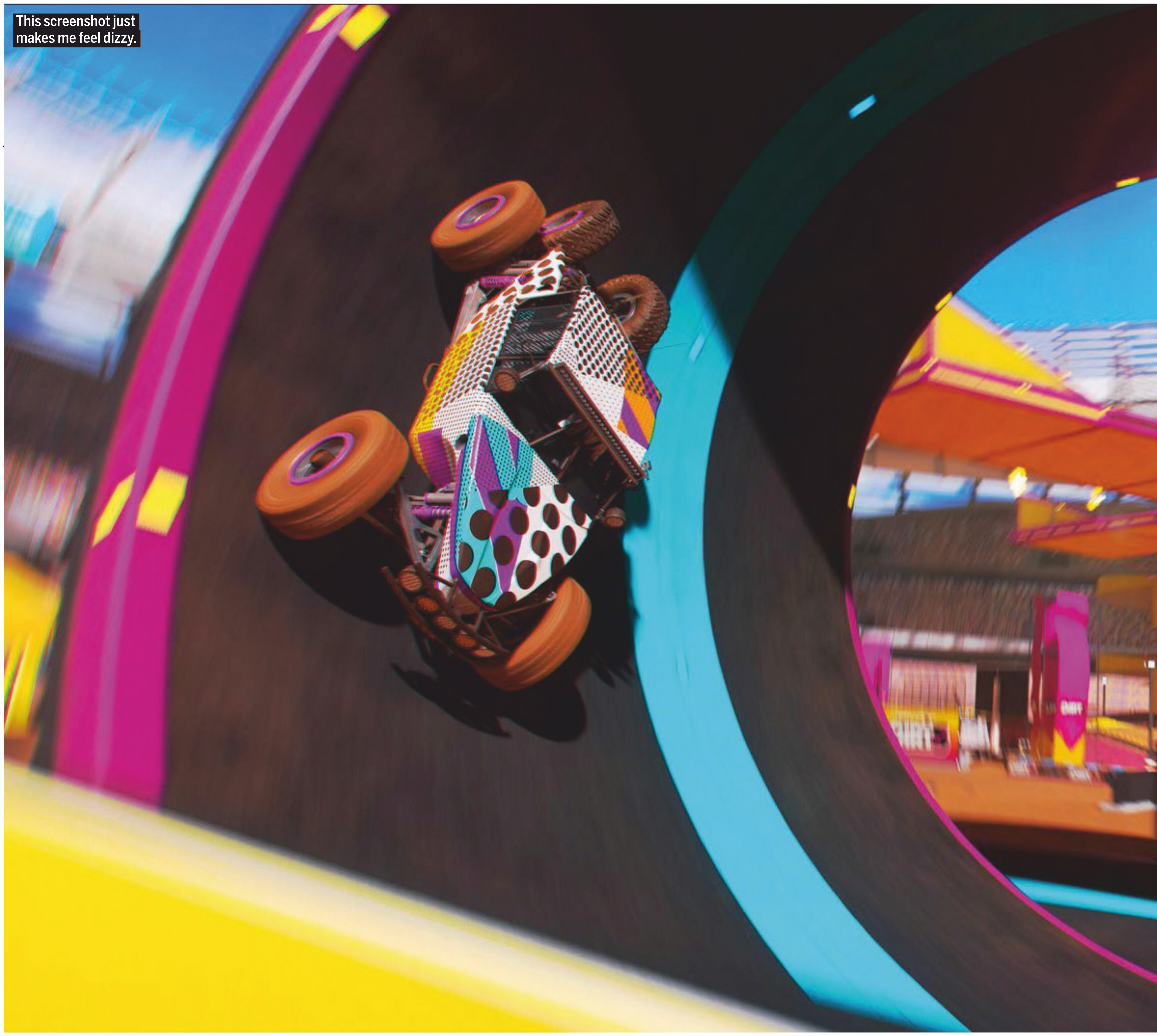
Luke Kemp



Please don't say this turns into a tank.

A quite frankly unfair advantage in Hide and Seek.

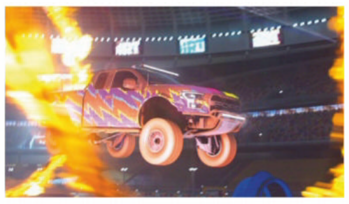
GOT A CIGARETTE?
NO PARKING



This screenshot just makes me feel dizzy.

The bright colours scream "I am less serious than *Dirt 4*".

Why does this car look so snooty?



NEED TO KNOW

RELEASE	DEVELOPER	PUBLISHER	LINK
October 16, 2020	In-house	Codemasters	dirtgame.com/dirt5

DIRT 5

What the track editor says about the series' identity

I'll be honest: I am not actually cut out for level design. Normally that's fine – because it's not my job – but it can prove tricky when I'm let loose on a *Dirt 5* build designed to showcase the series' new Playgrounds mode. It's a track editor, you see, letting you create time trials and gymkhana courses, and upload them for others to try out.

And yet, for all its many options, here I am wondering when placing far too many buses stops being the idle desperation of the creatively starved and starts being a valid aesthetic choice. Luckily, the build also includes a bunch of sample tracks created by Codemasters, showing off the flexibility of the editor.

There's some fun stuff here. It's not exactly *TrackMania* wild, but it's robust enough to let players realise some inventive ideas. Speedhelix is a boxy course with a large spiral ramp as its centrepiece. Hit and Run offers an almost *Fall Guys*-style series of gates, with bright flashing lights showing you which are safe to drive through. The Jump, self-explanatory as it may sound, makes liberal use of hairpin bends to ensure you're jumping over bits of the track you've previously cleared. Note to self: if I place enough hairpin bends, I might be able to fashion a track around these buses. Instant course design.

RUSH OF MUD

The most interesting of the sample tracks are less race courses than game show ideas. Dropsector is almost a Trials level, with large vertical slopes that require precise acceleration to inch over. Skifree's course rises impossibly into the sky, and throws in some blind jumps and technical slopes for good measure. You're not bound to traditional race courses, either. The three modes – Gate Crasher, Gymkhana and Smash Attack – let you focus on checkpoint racing, trick driving, and course plotting respectively. As long as you can finish the course yourself, it's yours for the making.

IT'S ROBUST ENOUGH TO LET PLAYERS REALISE SOME INVENTIVE IDEAS

It is, in other words, a track editor – a cool extra that will no doubt prove an irresistible canvas for some talented creators, and a fun if unessential extra for everyone else. But more interesting to me is the deeper point of what Playgrounds says about *Dirt 5*'s ethos. The *Dirt* series has always had a bit of an identity crisis, desperately wanting to be brash and modern and bombastic, but also a rally game with its roots in the more serious *Colin Mcrae* series. *Dirt 2* was loud and silly; *Dirt 4* was a game for your dad. Now, though, *Dirt Rally 2.0* exists, and caters perfectly to the more hardcore audience.

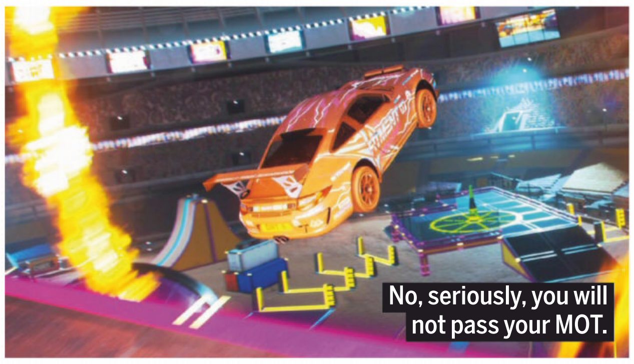
PLAYED IT

Dirt 5 is free to be what it wants to be, and, from what I've seen so far, it wants to be an unashamed celebration of off-road racing.

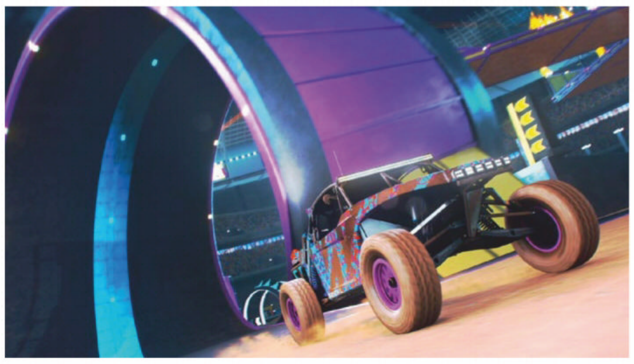
That's great news. I appreciate a realistic rally sim, but at the same time they can be exhausting to play – having to be consistently good with no mistakes lest you end up in a ditch, broken and defeated. Over the last few years I've turned to *Forza Horizon* to get my carefree car jollies. It's a series that, like the early iterations of *Dirt*, doesn't lean too hard into arcade handling despite its less serious focus, offering a great sense of realism to the silliness.

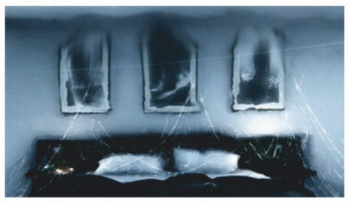
But even *Forza Horizon* focuses primarily on road racing, where you have to care about things like racing lines and, ugh, traction. Frankly I prefer messing around off-road – barrelling towards a corner at inadvisable speeds, and just about making it through unscathed thanks to a last minute Scandinavian flick. If *Dirt 5* is able to nail that spirit – to embrace the best version of the series as a celebration of the fun and the absurd – it could be something special.

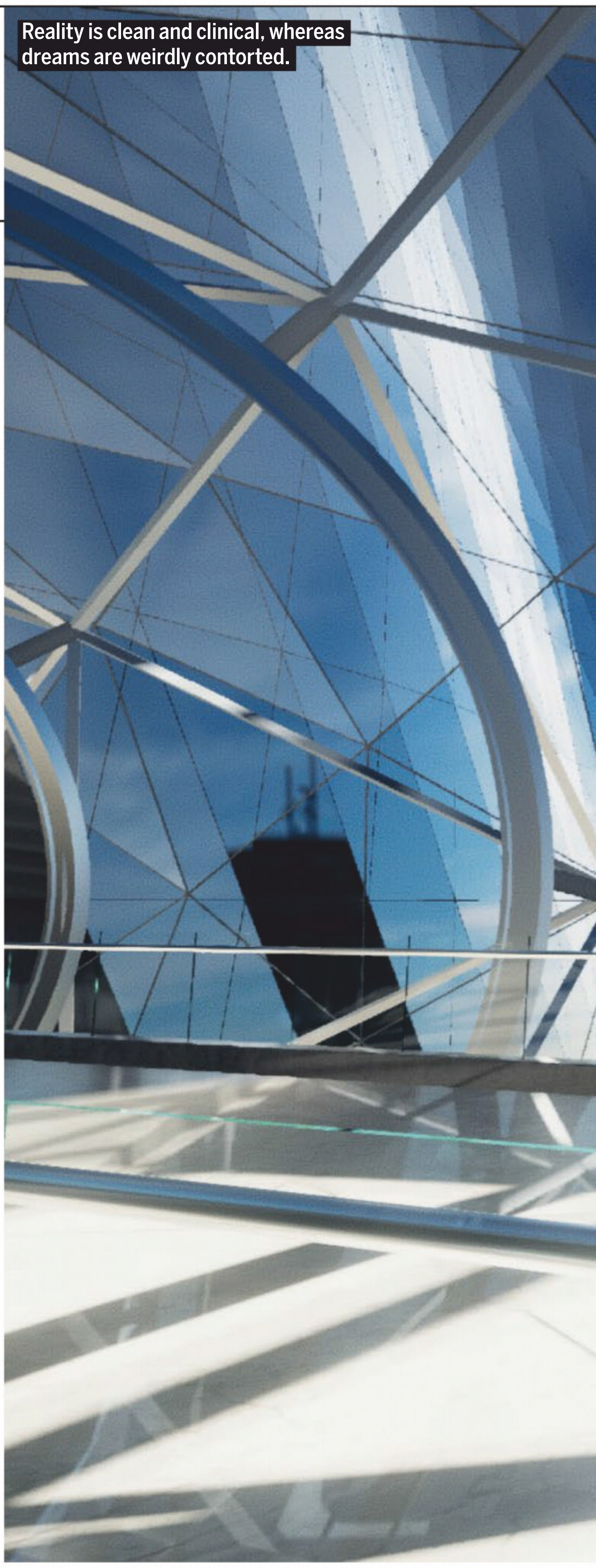
Phil Savage



No, seriously, you will not pass your MOT.







Reality is clean and clinical, whereas dreams are weirdly contorted.

NEED TO KNOW

RELEASE	DEVELOPER	PUBLISHER	LINK
TBC	Playmestudio	Raw Fury	thesignifier.com

THE SIGNIFIER

Explore the minds of the dead in this psychological mystery game

Good detectives will tell you that evidence isn't everything. Understanding the tangled emotions behind a crime is vital to solving it, and tech-noir mystery game *The Signifier* looks to explore that idea vividly, blending reality, memories, and dream spaces to create a string of unique cases to crack.

FIRST LOOK

You play as Frederick Russell, a psychology expert and AI researcher who has built an experimental deep brain scanner called the Dreamwalker that lets you explore the realms of a person's mind after they have passed. Rifling through a person's private thoughts is more than a little invasive, and so Frederick's technology is, understandably, a bit controversial. However, the police force has turned a blind eye, letting him continue his research in exchange for helping them out with their cases – allowing you to slip into the role of brain detective.

Developer Playmestudio has been inspired by the world of psychoanalysis, so be prepared for talk of the unconscious mind, human cognition, and semiotics. If you took any sort of psychology class in school, *The Signifier* is the perfect pop quiz to tickle your brain.

MIND GAMES

Playmestudio showed me the introduction to the first case that involves the vice-president of a giant AI company found dead in her apartment. With suspicions surrounding her death, Frederick is called in to help solve the case by jumping into her brain data.

DEVELOPER PLAYMESTUDIO HAS BEEN INSPIRED BY THE WORLD OF PSYCHOANALYSIS

Your first job is to inspect the scene of the crime. Apart from where the body was found upstairs, the vice-president's apartment is pristine. It has a sleek, modern look where everything is bright white, made all the shinier by the giant wall of glass that overlooks the city. It's visually very striking. Exploring the apartment gives you a foundation of the case, and keeping an eye out for details will certainly help later down the line.

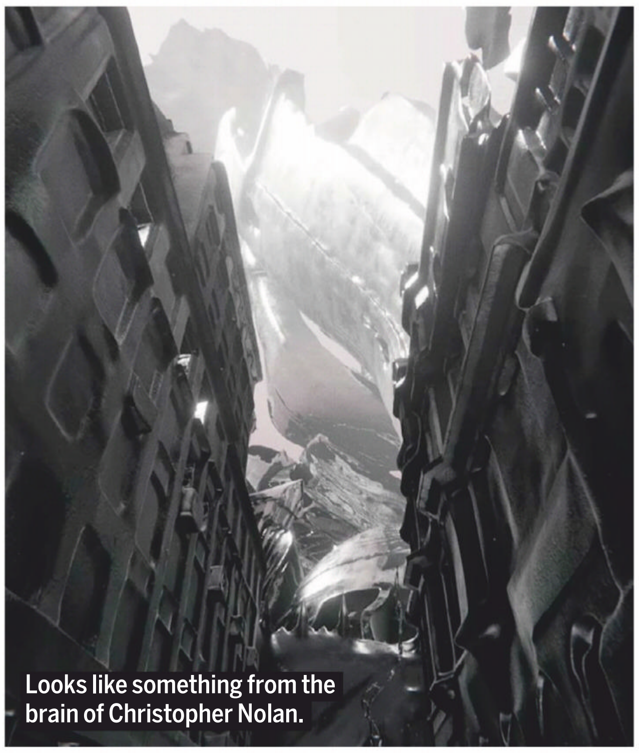
After speaking with the detective on-site about the details of the case, you dash back to your lab and boot up the victim's brain from what looks like a hard drive. The Dreamwalker machine interprets the data and builds a replica of the time of the victim's death, creating two scenarios: the person's objective memories, and their subjective memories.

In the objective memory, I'm taken back to the apartment, but instead of an immaculate living space, it's an uncanny, slightly warped version of her home. It's a place that resembles a frozen reconstruction of the person's experiences, and holds more clues to what happened on the evening of her death. In this case, a laptop can be seen on the kitchen counter which is missing from the crime scene.

After navigating the objective headspace you can switch to the subjective memory. This is where it gets weird – the apartment becomes contorted and objects have been stretched beyond recognition. This place reflects the emotional state of the victim, and presents it in a dream-like vision. You need to interpret the meanings of these images to understand how she felt before her untimely death.

Jumping between the two headspaces is how you solve cases in *The Signifier*, and I'm intrigued. Playmestudio hints that this first case sends Frederick into a spiral of geopolitical agendas, directly questioning the breaking of privacy undertaken by those in power. I love how it blurs the lines between polarising ideas like the real and the imagined, life and death, and memories and dreams. It's a surreal mystery that will be playing on my mind until the full release.

Rachel Watts



Looks like something from the brain of Christopher Nolan.

18+

WHAT IS
AVAXHOME?

AVAXHOME -

the biggest Internet portal, providing you various content: brand new books, trending movies, fresh magazines, hot games, recent software, latest music releases.

Unlimited satisfaction one low price
Cheap constant access to piping hot media
Protect your downloadings from Big brother
Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

All languages
Brand new content
One site

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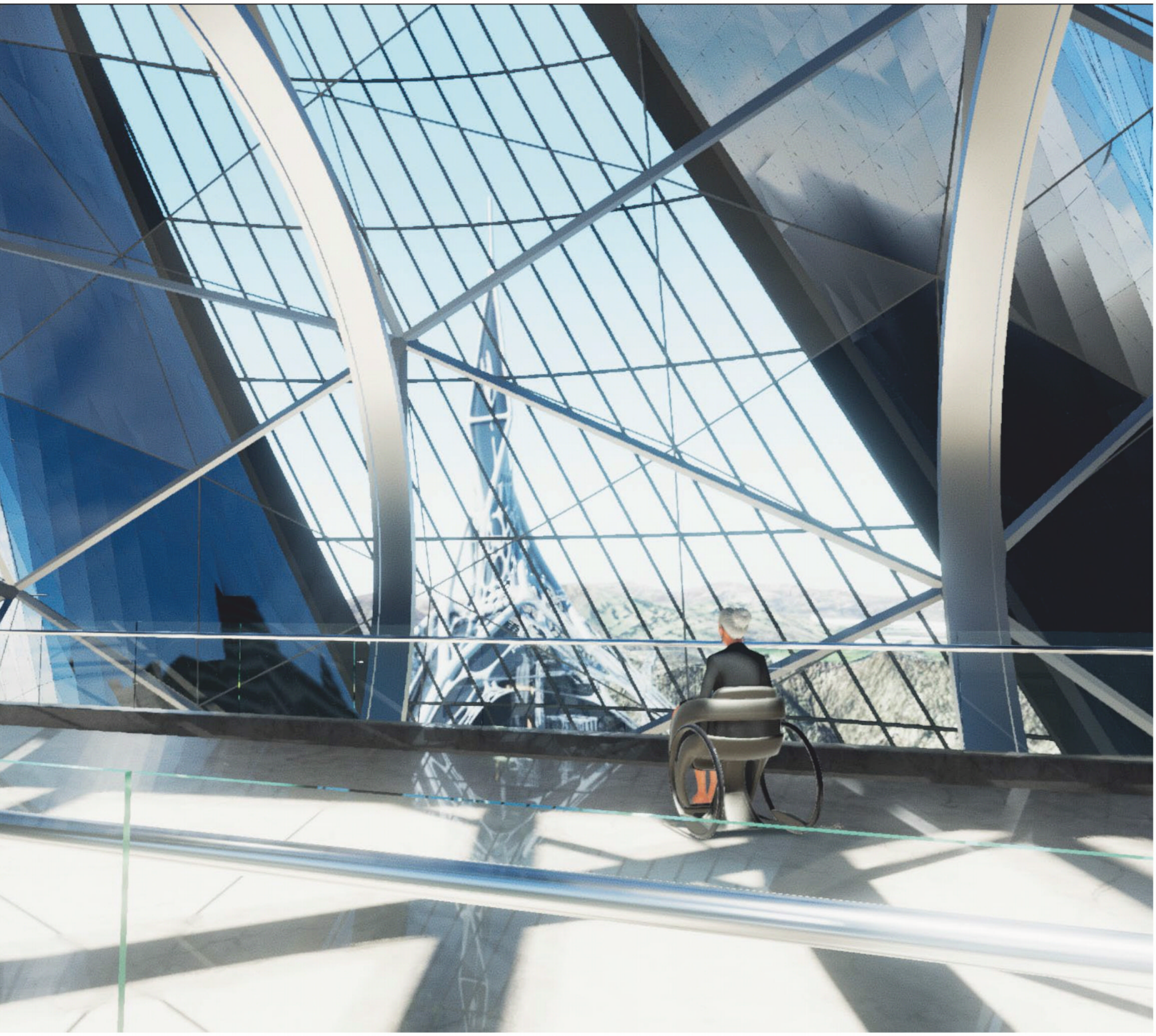
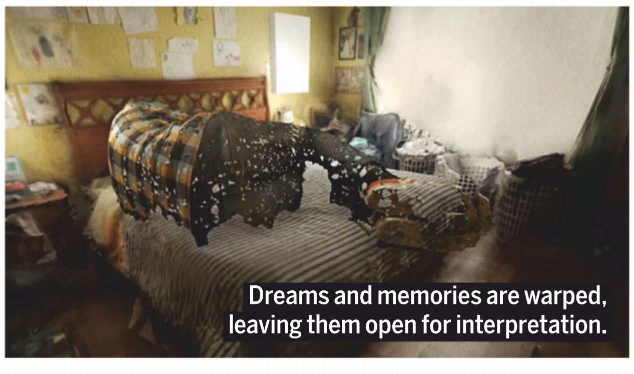
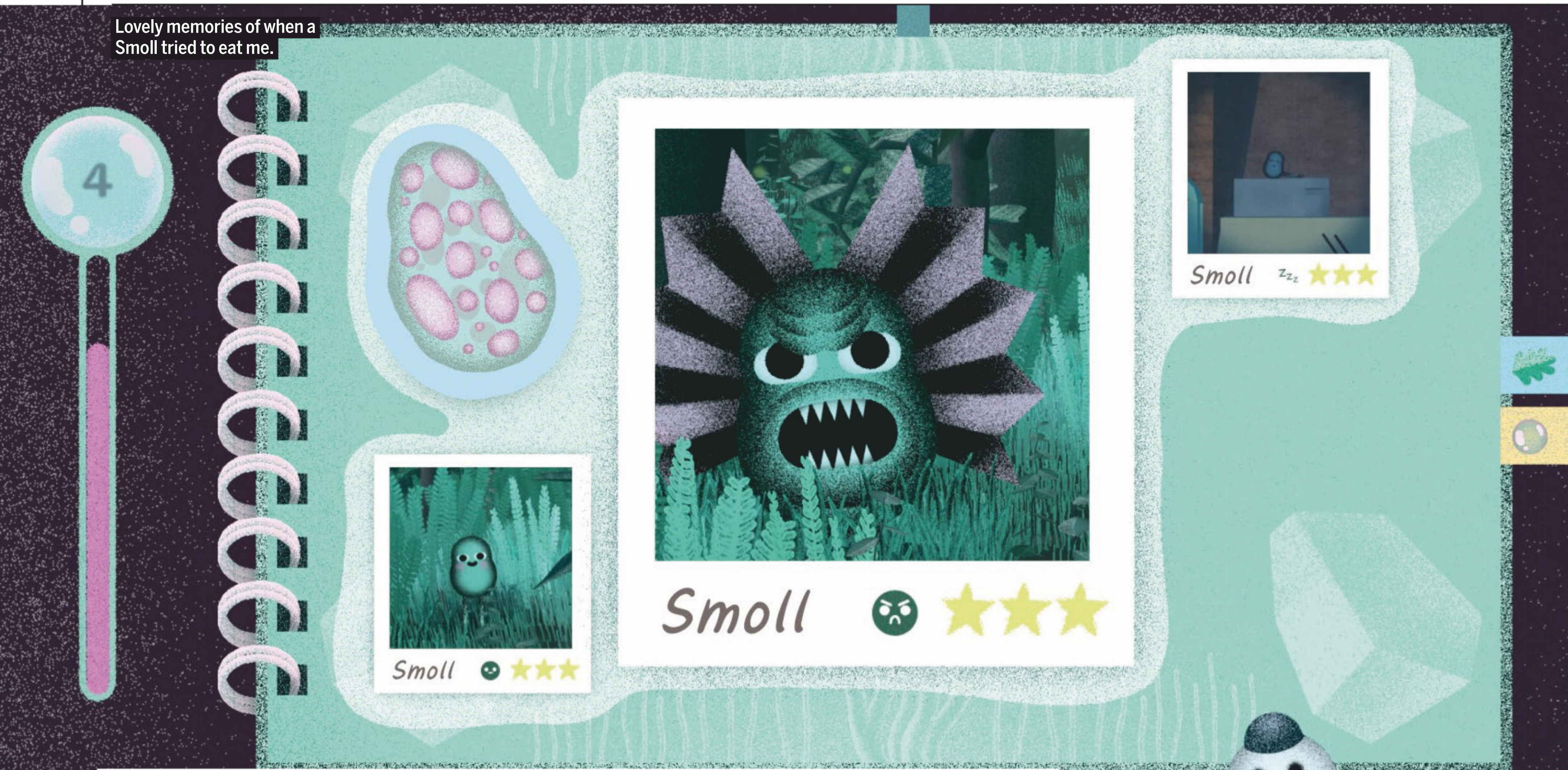


The Dreamwalker is your gateway to the subconscious.



Dreams and memories are warped, leaving them open for interpretation.



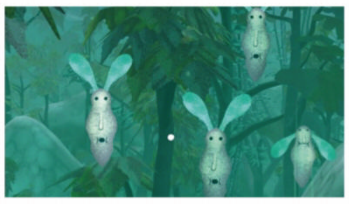
Lovely memories of when a Smoll tried to eat me.

NEED TO KNOW

RELEASE	DEVELOPER	PUBLISHER	LINK
2020	Ghostbutter	In-house	penkopark.com

PENKO PARK

A photo tour through an eerie supernatural world



There have been a handful of *Pokémon Snap*-style games on PC, but none quite like *Penko Park*. Ghostbutter's cute but creepy photography game leaves its inspiration's cuddly approach behind as you snap the bizarre creatures of a forgotten nature reserve long abandoned by humans. Who knows what mysterious entities have thrived here out of sight of people for so long? It's your job to find out, and record their images for posterity.

PLAYED IT

The critters of *Penko Park* are a curious bunch that land somewhere in between wide-eyed cuteness and unnerving creepiness. Sitting in a motorised buggy with your camera at the ready, you attempt to observe these peculiar creatures as they hang out in the wild. With 60 photo slots for each ride, you have to make each one count, timing each shot carefully.

There's a real knack to capturing the good, and bad, sides of *Penko Park*'s strange residents. You might need to coax them out of their hiding places, or adjust your camera's lens to zoom in close on those that are particularly shy. Each critter has their own distinct personality, and catering to what they need is vital to getting that flawless photo.

There's an impressive variety of beings to photograph, from skittering bugs to little grumpy lumps, all of them feeling like sprites out of some imaginary country's folklore tales. And like monsters from an old legend, they have a dark side.

PARK LIFE

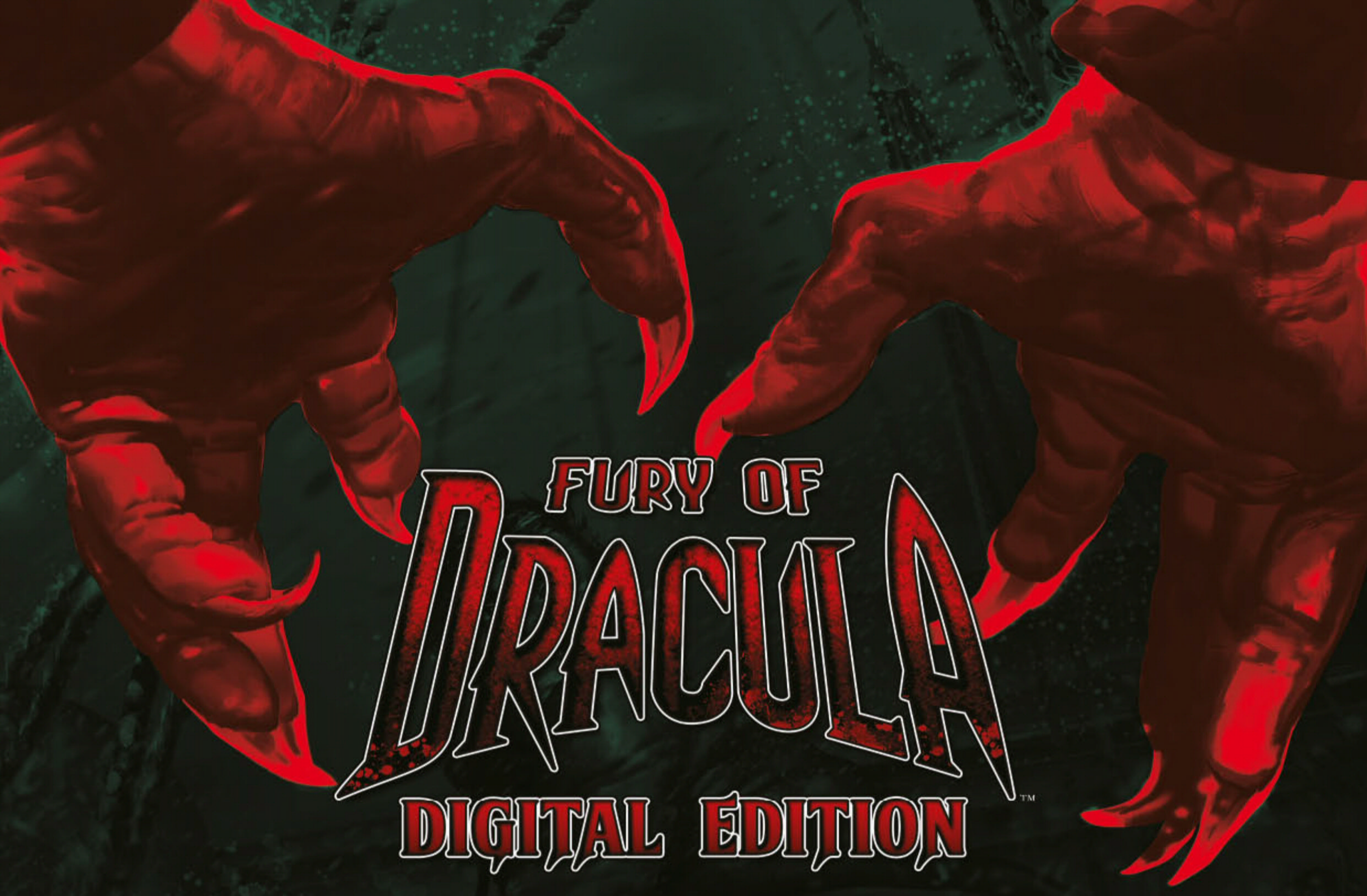
I'm riding quite peacefully in my buggy when I see something with six long, black legs and a malevolent smile dart into a bush. Another time, I take a snapshot of a seemingly peaceful creature only for it to fly into a rage and charge toward me, bearing a mouth full of sharp fangs. You need to keep your wits about you – it's easy to get startled and lose the opportunity for a perfect snap.

I SEE SOMETHING WITH SIX LONG, BLACK LEGS AND A MALEVOLENT SMILE

At the end of each run, you get to paste your photographs in a guidebook which keeps track of what creatures you've seen. Similar to *Pokémon Snap*, each pic is scored, and you're given points to unlock special abilities. In my time with the game, I earned a grappler to flip switches, and the ability to change the direction of my buggy at junctions, letting me explore new routes. Ghostbutter says that there are secret paths and hidden areas to uncover, leading you to understanding more of the park's spooky history. There's also an unlockable GhostMode for your camera, letting you see some of *Penko Park*'s even more mysterious residents.

The game's planned for release later this year, and I'm looking forward to snapping more pictures of these curious creatures when it does – even if some of them give me nightmares.

Rachel Watts



FURY OF DRACULA
DIGITAL EDITION

COMING SOON

The iconic board game faithfully reborn on PC. Hunt Dracula across Europe with your friends, or avoid hunters as the trecherous Count himself.

Reverse Ticket

Knife
KNIFE
Mina Harker
Dracula

Mina Harker Stabs Dracula!
3 damage

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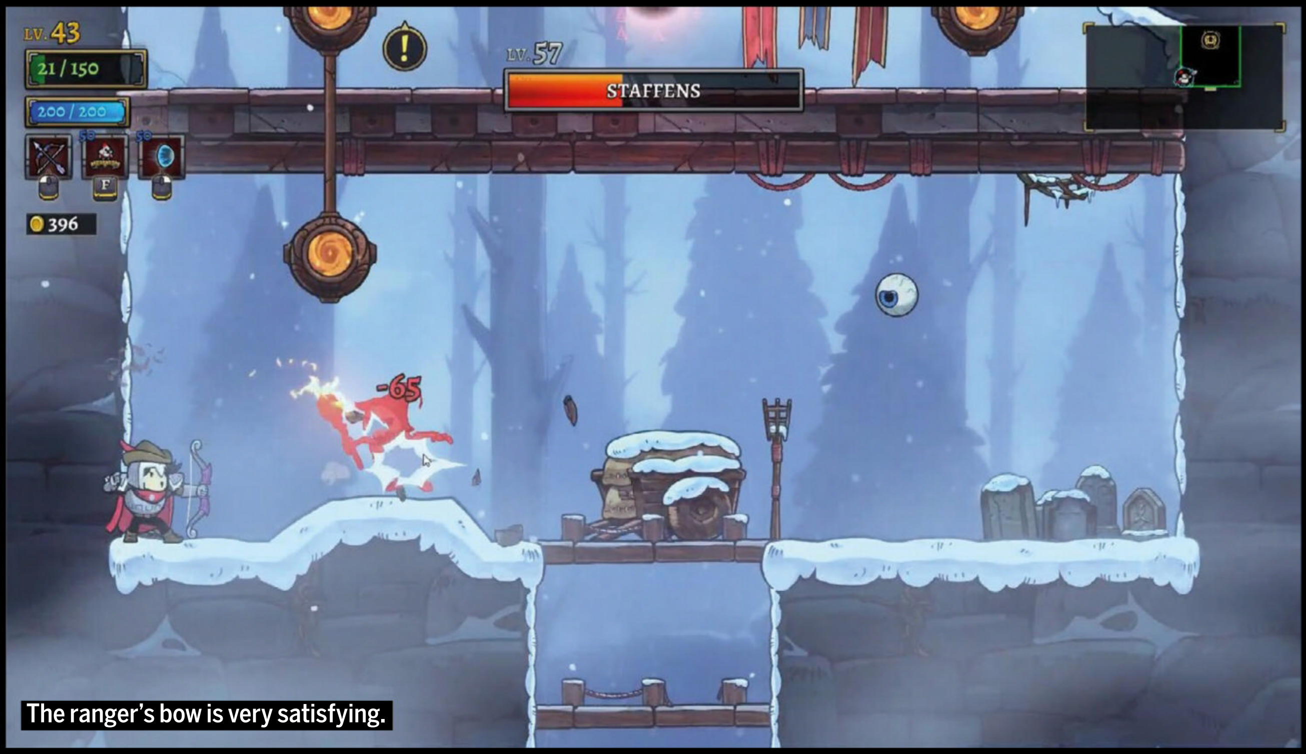
Yep, nothing ominous about this.

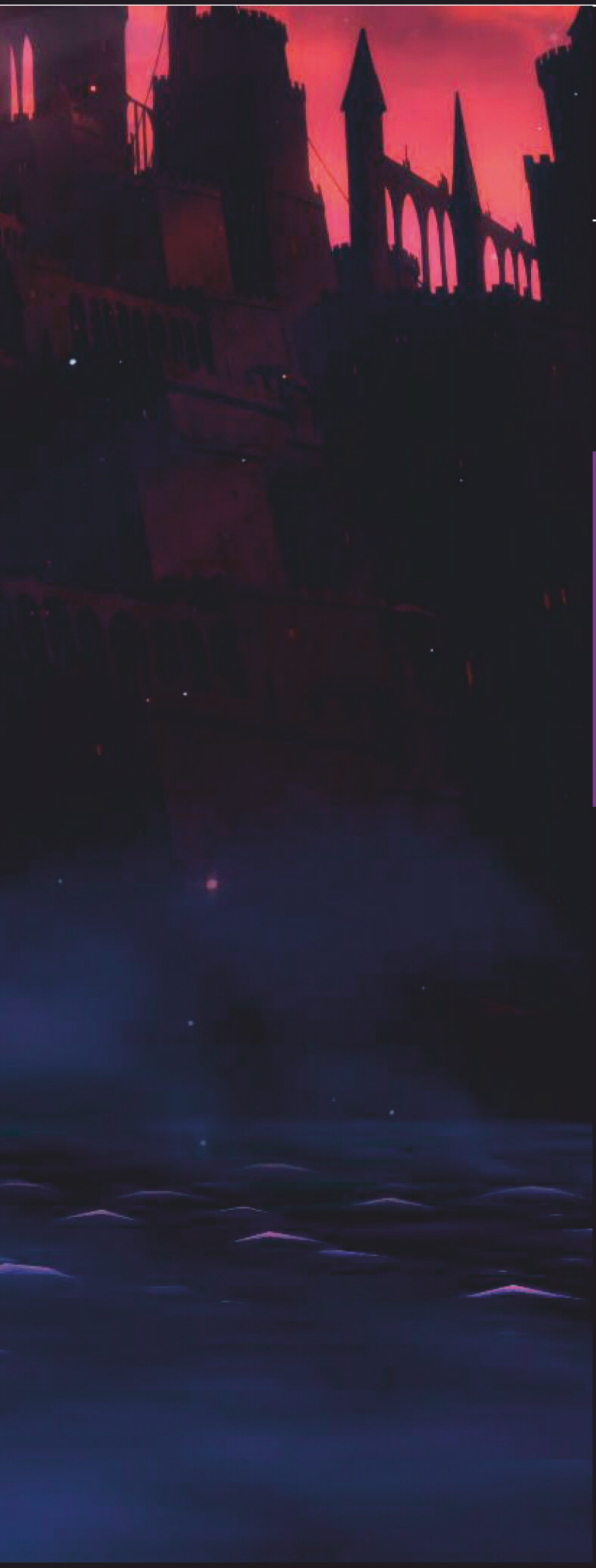
Choose Your Heir

Sir Justin, the prodigal son.



LV. 43
21 / 150
200 / 200
F
396
LV. 57
STAFFENS
-65

The ranger's bow is very satisfying.



NEED TO KNOW

EXPECT TO PAY	DEVELOPER	PUBLISHER	LINK
£15.49	Cellar Door Games	In-house	roguelegacy2.com

ROGUE LEGACY 2

A great indie game dynasty reveals a new heir

Mistiming a jump, I clatter into an armoured brute. I tumble back, managing to bail out before I hit the spike trap below, but not before I'm hit by an incoming firebolt from a very angry wizard. My unfortunate protagonist Lady Alex shrugs before shuffling off her mortal coil.

It's been six years since I last played *Rogue Legacy*, and in many ways *Rogue Legacy 2* makes it feel like I've never been away. It's instantly recognisable, from the endearingly clunky combat to its cheeky sense of humour. The premise remains unchanged: each time the roguelite claims the life of my hero, one of their heirs continues the fight. After spending their inheritance – the money you earned on your previous run – on permanent upgrades, my successor heads off to make their own fortune, and almost certainly perish in the process.

Characters differ by class – warrior, mage, barbarian and ranger – and by trait, 'genetic' attributes that impact visual appearance, combat abilities, or the game's overall look. 'Divas' spend their lives in the spotlight, the areas around them almost entirely blacked out; 'Clumsy' characters immediately destroy any object they touch, while 'Pacifists' can't deal any damage whatsoever.

ROGUE NATION

While much of *Rogue Legacy 2* sticks closely to the original, there are a few significant updates. A cartoonish look replaces the original pixel art, with new animations that make combat feel faster and imbue many of your enemies with more personality than their predecessors. Another change is the arrival of rooms dedicated to platforming, not combat, introducing areas apparently inspired by *Celeste* or *Super Meat Boy* – spike-covered gauntlets that offer a chest full of coins if you're prepared to risk taking damage. It's an interesting concept, but one that fails due to an awkward mixing of genres and an overall lack of content.

ANOTHER CHANGE IS THE ARRIVAL OF ROOMS DEDICATED TO PLATFORMING

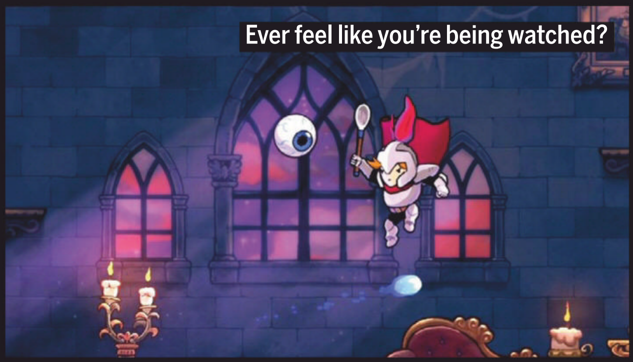
In its current state, *Rogue Legacy 2* is pretty bare bones. It took me just five hours to earn enough money to unlock every upgrade in the current build, rendering money meaningless and ensuring I'd ignore its challenge rooms, rushing instead to complete more meaningful objectives. The second chapter is missing entirely (although the third is intact), a note from the developers explaining its absence. Right now, the game is unfinished in a bizarrely visible way, robbing itself of the momentum of its successful first few hours.

PLAYED IT

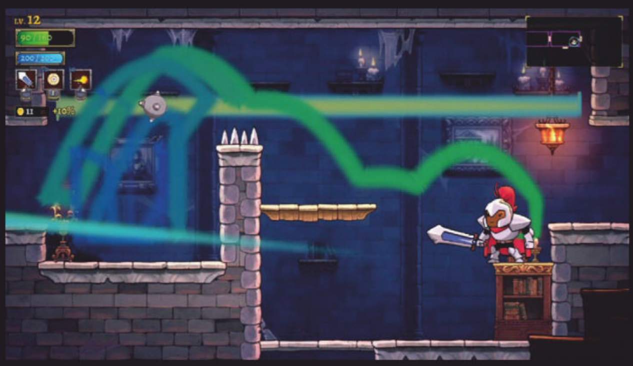
More importantly, *Rogue Legacy 2* is not a platformer, and as such it's missing much of that genre's precision. This is a game that thrives on its sense of pace, but instead encourages a slow, methodical approach. It's a roguelite that trivialises the central tension of its genre – death comes fast, you pick yourself up, you start again. But when death comes because you can't beat a gauntlet that you never get to practice, or you fell in a spike pit you never could have seen, picking yourself up and starting again gets a little harder.

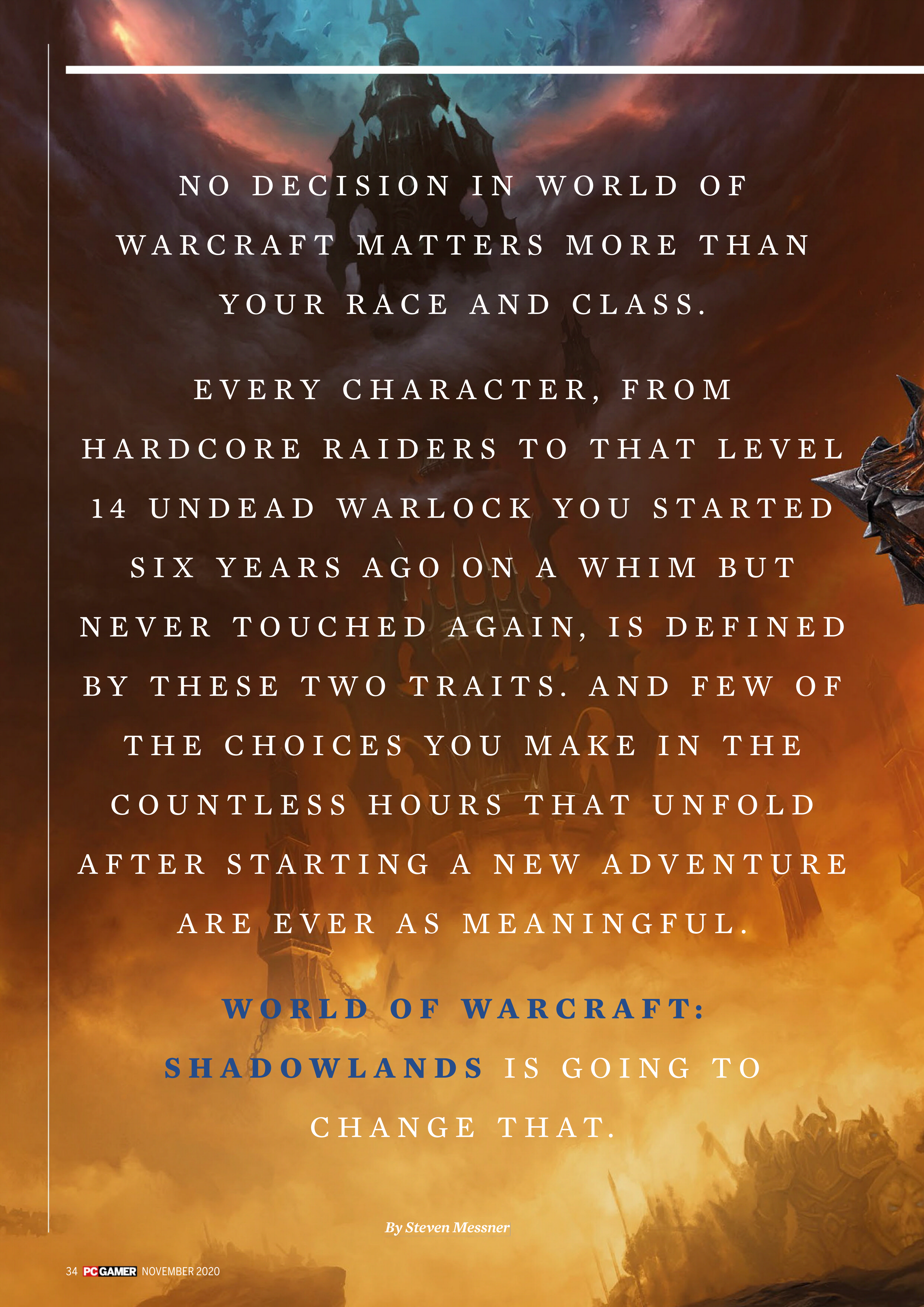
If you played its predecessor, *Rogue Legacy 2* will feel instantly familiar. A new art style and some new monsters don't hide what was, and often remains, a slick, fast-paced roguelite with an endearing hook, even if the platformer trapped inside the new arrival is an unwelcome addition. For now, the game's biggest issue is a simple lack of content. With nothing new to earn resulting in no real means of progression, *Rogue Legacy 2* doesn't yet have the depth to compete with the genre's bigger hitters, making for an initially sparse launch version that seems likely to hurt it in the long run.

Alistair Jones



Ever feel like you're being watched?



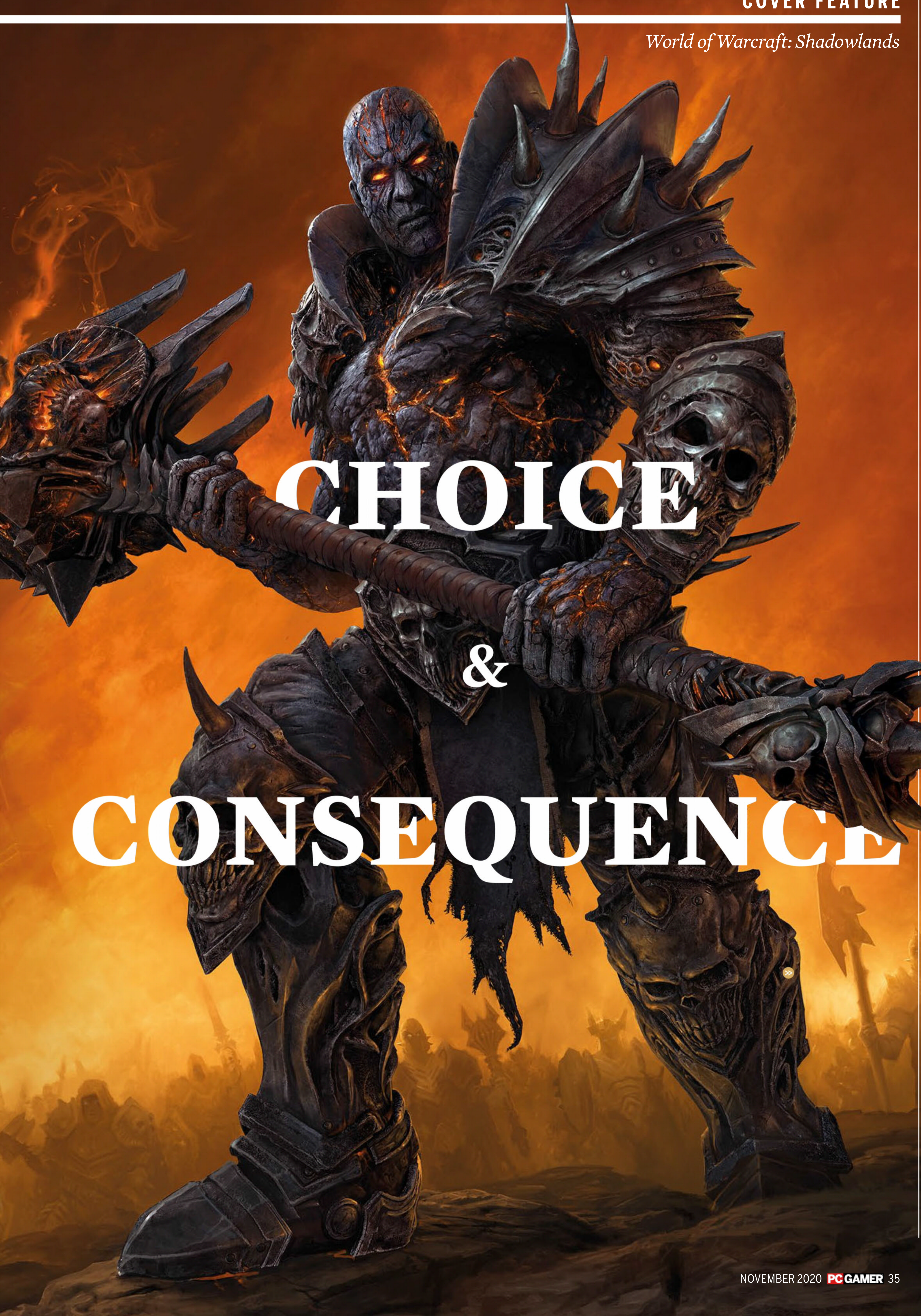


NO DECISION IN WORLD OF WARCRAFT MATTERS MORE THAN YOUR RACE AND CLASS.

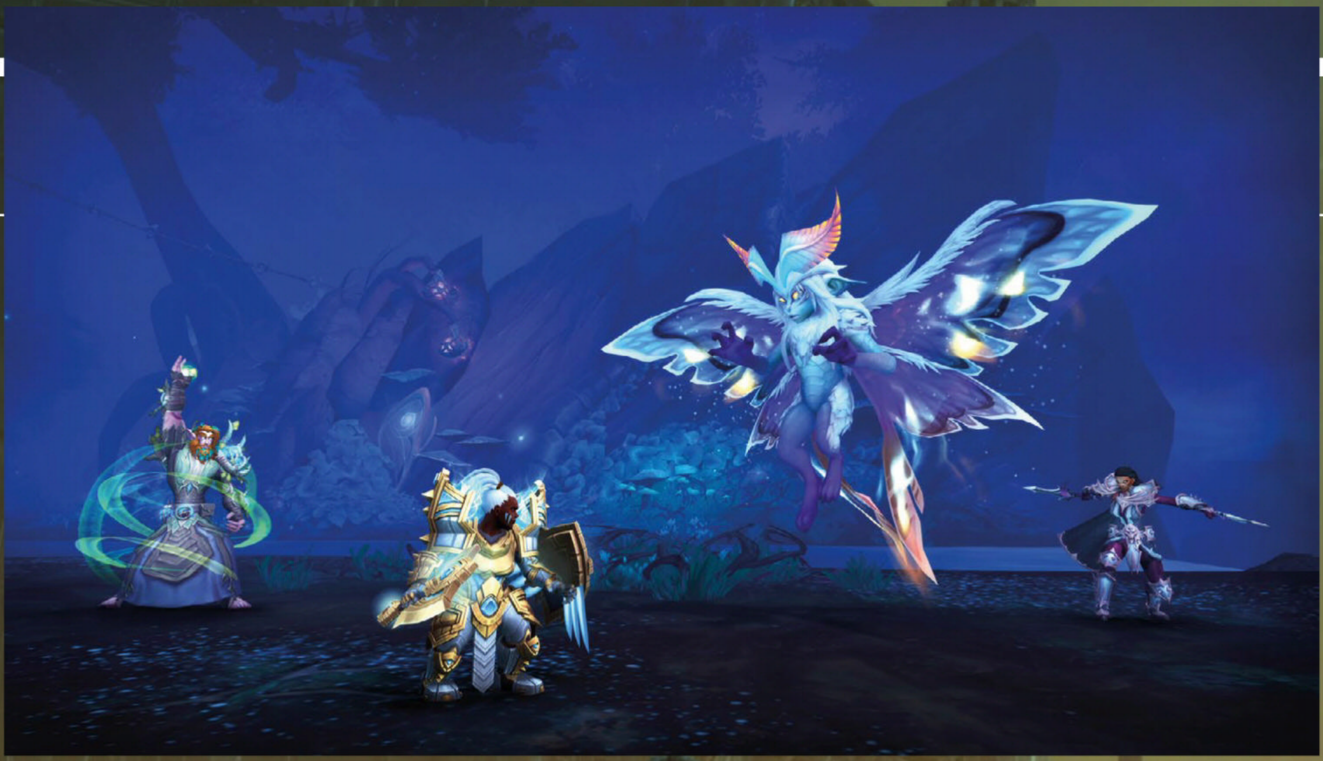
EVERY CHARACTER, FROM HARDCORE RAIDERS TO THAT LEVEL 14 UNDEAD WARLOCK YOU STARTED SIX YEARS AGO ON A WHIM BUT NEVER TOUCHED AGAIN, IS DEFINED BY THESE TWO TRAITS. AND FEW OF THE CHOICES YOU MAKE IN THE COUNTLESS HOURS THAT UNFOLD AFTER STARTING A NEW ADVENTURE ARE EVER AS MEANINGFUL.

WORLD OF WARCRAFT: SHADOWLANDS IS GOING TO CHANGE THAT.

By Steven Messner



CHOICE & CONSEQUENCE



TOP: Ardenweald gives me big The Dark Crystal vibes.

Below: Torghast is big. Like, really big.

When it launches later this fall, *Shadowlands* will take players on a journey to the afterlife in order to save the world of the living. And at the end of that initial story campaign, players will have to make the most difficult choice they've faced since the character selection screen. But *Shadowlands* is more than a chance to inject some much-needed feeling of consequence back into your adventure. It's also an opportunity for Blizzard to tear the veil off an entirely new part of the *Warcraft* universe – one that wasn't spelled out in game manuals, tie-in novels, or lore bibles decades ago.

"Many of our past expansions had a clear anchor in some large established villain, piece of lore, a place in the world," game director Ion Hazzikostas tells me. "There were reams of novels that have been written or past references in games like *Warcraft III* or otherwise. But *Shadowlands* really started from almost a footnote, frankly. It's a world created largely whole cloth from the imaginations of our artists and our narrative designers."

THE OTHER SIDE

To understand what's happening in the Shadowlands, players must be familiar with what happened during the climax of the current expansion, *Battle for Azeroth*. After being ousted from her position as Horde Warchief, the undead banshee queen Sylvanas Nightrunner flees to the frigid continent of Northrend. It's here that she battles the new Lich King, Bolvar, for his Helm of Domination that Arthas once used to rule the undead Scourge. Instead of wearing it herself, however, Slyvanas shatters it, tearing the veil between the living world and the Shadowlands – *Warcraft*'s version of an afterlife. Obviously that's not actually a good thing.

If you can believe it, the Shadowlands has it even worse. As lead narrative designer Steve Danuser explains, "The Shadowlands isn't just heaven or hell. It's an entire realm made up of different microcosms – each one a unique slice of a different kind of afterlife. When a mortal soul dies, each is judged by a cosmic being known as the Arbiter who determines which area of the Shadowlands is most befitting of their deeds and thoughts. Of those, players will explore five main zones, four of which are ruled over by a different Covenant."

"For example, Bastion, the first zone we're going to go to, is home to the Kyrian Covenant and these are bright, angelic spirits and they are the ones who ferry souls to the afterlife," Hazzikostas says. "On the other end of the spectrum are the Necrolords of Maldraxxus, the military might of the Shadowlands. When the Shadowlands wage war against other powers in the cosmos, that's where those forces come from."

EVERY SOUL THAT ENTERS THE SHADOWLANDS GETS AN EXPRESS PASS STRAIGHT TO THE WORST OF ITS HELLS

"All of those are beings that are of death in the same way that a demon is of disorder or fell, or a fire elemental is of fire," Danuser explains. "These are magical creatures, and we get to explore the rules and the groundwork for this new kind of cosmic influence."

That's how the Shadowlands should work, but thanks to Sylvanas and her new benefactor known as the Jailer, that delicate cycle is broken. Now, every soul that enters the Shadowlands gets an express pass straight to the worst of its hells: a fifth, nightmarish realm known as the Maw. Souls that are sent here are imprisoned and tortured forever, causing the rest of the Shadowlands to experience what's basically a cataclysmic drought.

As players work through the story campaign and gradually reach max level, they'll tour each of these zones, learning about each Covenant that exists there while also puzzling out how to restore balance and return the Shadowlands to its normal order and defeat Sylvanas and the Jailer. At the end of that first chapter, players will have to make an important, long-lasting choice to join a specific Covenant. Each one offers different powerful abilities, unique loot, and their own story quests to complete. It's a decision that will affect the next few years of your life in Azeroth, and it's one not to be taken lightly.

BLOOD PACTS

"*WoW* has relatively few things that feel like they constitute your identity," Hazzikostas says. "It's your class, your faction, your race, maybe what professions you pick – because those are pretty weighty and hard to change easily. We're looking to add another piece to that identity, which is an essential part of the MMORPG genre with an emphasis on the RPG part of it. It's the role that you're playing, the things that distinguish your character from all the others that you're sharing the space with, that add a lot of depth and texture both mechanically, but also in terms of the story you're experiencing. Covenants are all that."

Once you reach the new level cap, your Covenant will be the hub of all your endgame activities. Each one has a unique storyline that'll see you unearth the mysteries of the Shadowlands and take the fight to Sylvanas and the Jailer, but the real draw is the powers that each provide. Joining a Covenant unlocks

CHOOSE WISELY

A quick overview of each Covenant and what they offer

KYRIAN OF BASTION

The Kyrian are the valkyries of the Shadowlands. They have owl butlers.

Signature ability: Summon Steward

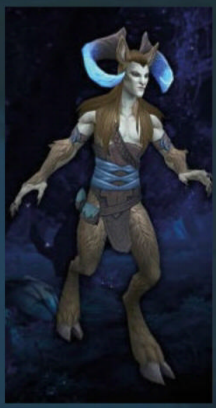
Call up your own owl butler who offers you a refreshing beverage and can perform several services once per day like hunting for Legendary item materials.

NECROLORDS OF MALDRAXXUS

The military might of the Shadowlands.

Signature ability: Fleshcraft

Form a shield of flesh and bone that protects you. Using the ability near corpses enhances Fleshcraft, making it capable of nullifying up to 50 percent of incoming damage.



NIGHT FAE OF ARDENWEALD

The druids of the afterlife, the Night Fae oversee the cycle of life and death in the afterlife.

Signature ability: Soulshape

Turn into a spirit animal and teleport forward while also increasing your movement speed. You can reactivate the ability to teleport again.

VENTHYR OF REVENDRETH

The vampire-like Venthyr take in souls who are pretty evil but not irredeemable and help them become less of a dick.

Signature ability: Door of Shadows

Choose a location up to 30 yards away and then step through an ethereal doorway to teleport to that location.

two new abilities: one signature ability that is universal to all players in that Covenant, and a second that is based on your chosen class.

Signing up with the vampire-esque Venthyr of Revendreth, for example, earns you the Door of Shadows, which opens a ghastly portal that you can step through to teleport yourself 30 yards away. The Night Fae of Ardenweald, however, offers you the Soulshape ability, which turns you into an agile fox that can zip through any environment.

These signature abilities have caused hot debate in the community, with players worrying that some might feel punished for making a decision that isn't considered the most optimal. Door of Shadows, for example, could theoretically be used to skip a combat encounter in a dungeon entirely – but if you decided to join up with the Kyrian instead and can't use it, players might not want to play with you. "That is a very legitimate, real concern," Hazzikostas says.

RIGHT: Who doesn't want their own personal owl butler?

FEAR AND FEEDBACK

Covenant abilities have become the defining discussion of *Shadowlands*' beta test, but Hazzikostas is hoping that as more features are added in preparation for launch, the choice of Covenant will become more nuanced and complex than merely enlisting with whichever one has the best ability as decided by the meta.

Covenants not only offer unique armour sets and cosmetic upgrades, but they also have an individualised system called Soul Binds. It's a bit complex, but in essence Soul Binds are a skill tree that represents your relationship to a notable character within your Covenant. As your relationship improves, you choose between new passive abilities on the skill tree – and there's even slots where you can socket gems that have their own abilities too. Each Covenant has three unique Soul Binds skill trees to unlock and level up, offering a ton of character customisation. Now, *WoW* is starting to feel a lot more like an RPG.

At the same, Hazzikostas says the team is listening closely to what players are saying and making adjustments. Initially, joining a Covenant seemed like a permanent decision, but recently systems have been implemented on the beta servers to allow players to switch – though that decision will carry consequences that make it impossible to jump from Covenant to Covenant as you please. Hazzikostas says a lot of it also factors down to balance, too.

"We've had these powers largely playable [in the beta] so we can start getting feedback on them, giving us time to iterate to basically solve the balance problem and make sure that if we're hearing that there's one clear outlier on the high end, we can rein that in," Hazzikostas explains. "If there's some power that feels like it's useless, we can redesign it or buff it significantly, and try to learn from some of the mistakes, frankly, that we made in a couple of our past efforts like some systems in *Battle for Azeroth* that didn't get enough early attention to let us really tune them."

DEAD STRAIGHT

Lessons learned from past mistakes like that can be found everywhere in *Shadowlands*. *Battle for Azeroth*, for example, tried to tell an intricate, multi-faceted story that changed depending on which faction you belonged to, with an overarching plot about Old Gods woven in between. In addition to zone stories that were disconnected from one another so that players could tackle them in any order, it made *Battle for Azeroth*'s narrative jumbled and incoherent.

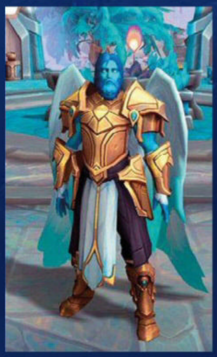
Shadowlands changes all of that. This time around, the storytelling is linear, and your quest to save the Shadowlands moves you through each zone in a specific order so there's better pacing and narrative cohesion – but that only happens on your first character. After that, you can tackle zones in whichever order so that levelling alternate characters has a bit of variety to it. "That was one of the lessons we learned as we were talking about going to *Shadowlands*," Danuser explains. "We wanted to tell a more focused and straightforward story."

Other ideas that failed to catch on in previous expansions, like *Legion*'s ultra-powerful Legendary items and *Battle for Azeroth*'s Island Expeditions have also been iterated on and have been transformed into entirely new systems. It makes *Shadowlands* feel like an expansion where years of experimenting and reimagining the tried and true MMO tropes could really pay off.

In *Legion*, for example, players often hated Legendaries because they were earned entirely through random drops. You could kill a beach crab and find it was holding an ancient and all-powerful piece of loot – or even worse, it was holding a Legendary item that was virtually useless for your character. Players hated that

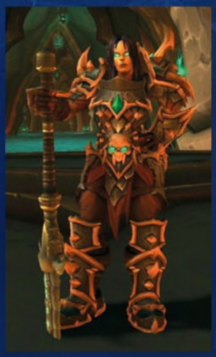
MISSED CONNECTIONS

Characters who died in Warcraft's long history turn up again. Here's just a few



UTHER LIGHTBRINGER

Perhaps the most famous Paladin in *Warcraft* history, Uther was Arthas' mentor before he betrayed him and cut him down. That probably still bugs him a lot.

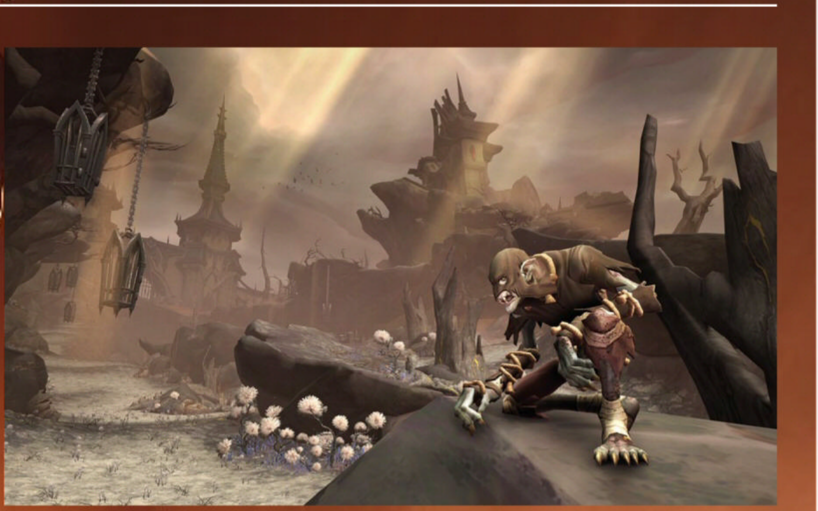


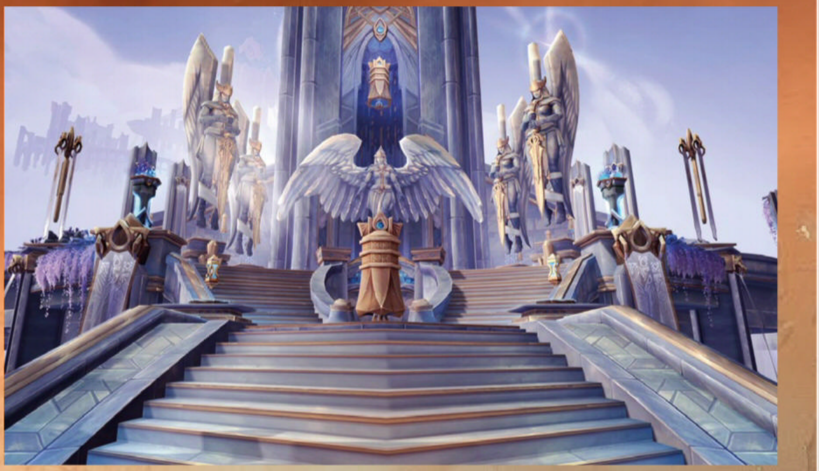
DRAKA

Though she never appeared in the game, Thrall's mom is a big deal – she's the mother of the most famous Horde warchief! Maybe she has some baby photos she can show us.

KAEL'THAS SUNSTRIDER

Used to be the leader of the Blood Elves before he turned all evil on everyone. Now he's spending an eternity with the Venthyr practicing mindfulness...





TOP: The entire zone of Revendreth is actually just the remains of a gothic castle.

ABOVE: The Kyrians sure know how to make a good first impression.

kind of randomness. In *Shadowlands*, however, Legendaries aren't randomly awarded but earned by tracking down specific recipes and taking them to a special crafter who will make them for you. It's a deterministic system that gives players total control over which Legendaries they want. The idea is that, over time, players will amass a collection of Legendaries that will suit different situations.

DIE, DIE AGAIN

Earning the resources required to craft a Legendary piece of gear, however, requires braving *Shadowlands*' biggest experiment yet: a procedurally-generated roguelike dungeon that changes each time you enter it. Called Torghast, Tower of the Damned, it's one of the central pillars of *Shadowlands*' endgame. After playing with it for hours in the beta, I can honestly say it's one of the most exciting new features ever added to *World of Warcraft*.

Torghast is a bit bizarre, though, if only because MMOs and roguelikes couldn't be more opposite in so many ways: one is about long-term persistence and a steady increase in power while the other is about wild power spikes, oppressive challenge, and the inevitability of dying, losing everything and starting over. That's exactly what senior game designer Paul Kubit finds most exciting about Torghast. "There's been a lot of challenges for us to marry the two concepts together," he says, "but we,

IT'S ONE OF THE MOST EXCITING FEATURES EVER ADDED TO WORLD OF WARCRAFT

as developers and gamers, enjoy playing them enough that we wanted to have one in our game too. It ended up working out great."

If you've played a roguelike before like *Dead Cells* or *The Binding of Isaac*, Torghast is exactly what you might imagine. Alone or with a party of five, players enter whichever two wings of Torghast are open that week and navigate through a procedurally generated dungeon, facing puzzles, monsters and boss fights that can change between each session. The higher you climb through the different floors, the tougher the fights become. And with six different wings that each have their own aesthetic, monsters, and bosses that rotate weekly, there's a whole lot of variability between runs.

The real fun of Torghast is its Anima Powers, though. As players explore, they'll periodically have to make a choice between one of several powers that can fundamentally change their character in exciting and often wild ways. The further you explore, the more these chosen powers begin to stack, creating sometimes hilarious combinations. As a Demon Hunter, for example, I found an Anima Power that extended my powerful demon form if I killed rats while it was active. I soon stumbled into a room that was full of rats, turning what should be a 15-second ability into something that lasted almost ten minutes. Just after that, I found an Anima Power that turned me into a giant too. By the time I got to the final room to fight the boss, I wasn't sure which of us was the real monster.

"That's something that we focused on a lot," Kubit says. "[Because] the powers that you get in Torghast are per run, we can make them super punchy. You can feel the impact of any power you get instantly. When you compare that to almost anything else in *WoW* – when you get a new weapon or something like that, you might go up by a couple of item levels, but unless you're paying attention to the numbers, you might not actually notice that effect. We can really, really focus on that here."

CHOOSE WISELY

Sixteen years after its launch, it's a bit surreal to be excited about another *World of Warcraft* expansion. It's a testament to how tenaciously Blizzard is tinkering and experimenting with the foundations of its MMO, forging onward even when those experiments fail and

SIDE HUSTLE

Each Covenant also has a unique endgame activity that's like its own separate minigame. Here's how they work

PATH OF ASCENSION
KYRIAN

Play as a Kyrian champion with their own powers in a boss-rush mode to earn unique loot and upgrades.

ABOMINATION FACTORY
NECROLORDS

Love *Warcraft III*'s Abomination units? Make your own! Each one becomes a permanent part of the Necrolords.

QUEEN'S CONSERVATORY
NIGHT FAE

It's *Stardew Valley* except instead of crops you tend to soul seeds that blossom into spirits that give you loot.

THE EMBER COURT
VENTHYR

Vampires love a good party, so you get to throw one. Choose guests, entertainment, food, and more.

BLIZZARD IS PIVOTING TO FOCUS ON GIVING YOU MORE CONTROL OVER YOUR ADVENTURE

trusting that those lessons can inform better ideas in the future. It's exactly why, after players complained about the way randomness was infesting so many of *WoW*'s systems, Blizzard is pivoting to focus on giving you more control over your adventure. "It's come from listening to the community and it's evolving the game in a way which we think is more fun," Kubit says.

"Player agency is something that we've heard a lot in terms of desire from the community," Hazzikostas says. "But also, in reflecting on our own designs and on places where randomness went too far and made players feel like they didn't have control over working towards specific goals. Over shaping their characters into what they wanted them to be. It's something that we've been talking about internally a lot for the last couple of years, and that became a really defining pillar."

That renewed investment in making choices matter along with more complicated progression systems like Soulbinds and Legendary item crafting makes *World of Warcraft* feel a lot more like an RPG in ways it often hasn't. It feels like both a return to what originally made *World of Warcraft* so captivating while also pushing onward into parts unknown. And Hazzikostas agrees. "It was a tremendous challenge," he says. "I think we knew it was going to be coming into this project, but having worked through it for the last couple of years, it's been all of that and more. *Shadowlands* is the most high concept, the most ambitious expansion we've ever undertaken." ■

TOP LEFT: Maldraxxus sure looks like a friendly place to visit.

MAIN: Unkillable monsters called Terragrue's hunt you down if you die too much in Torghast.

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RPG QUEST

IT'S ONE THING TO ATTEMPT TO SET OUT TO PLAY EVERY SINGLE GAME IN AN ENTIRE GENRE.

BUT TO FINISH EACH ONE IN THE ORDER THEY WERE RELEASED AND THEN TO BLOG DETAILED ACCOUNTS OF THEM IS A QUEST BEYOND.

THAT'S WHAT CHESTER BOLINGBROKE, AUTHOR OF CRPG ADDICT, SET OUT TO DO IN FEBRUARY 15, 2010, WHEN HE WROTE THE BLOG'S FIRST POST.

OVER TEN YEARS LATER, HE'S STILL GOING.

By Alex Wiltshire

So far, Chester has ventured through the very first mainframe-based computer role-playing games, charted the rise of *Ultima*, and battled through generations of computers. He's faced adversity, balancing the thousands of hours his adventure demands against the needs of his personal life. He's worked on it from his home in Maine, grappling with emulators and translations, and from hotels across the US while travelling for his job. He gave up on the whole endeavour once. But he's just as active now as he was when he started, and that's despite knowing that the whole thing is impossible.

It's already taken him over two years to play through the games of 1992, from *Wizardry: Crusaders of the Dark Savant* ("has a way of feeding the player overwrought prose") to *Ultima Underworld: The Stygian Abyss* ("groundbreaking, innovative, well-produced, addictive, enormously fun to play – and at the same time a bit disappointing in what they did and didn't do with the story"). And also the games you won't remember, from *Bandor: The Search for the Storm Giant King* ("I binged a decent chunk of TV series episodes while playing the game because I needed some other source of entertainment") to *Ultizurk II: The Shadow Master* ("extremely basic").

Chester Bolingbroke isn't the author of CRPG Addict's real name, since he prefers to stay anonymous. "I'm mostly concerned that if anyone in my work life finds out about the blog and I'm late with some project and they go on my timeline and see that I've post a couple of entries on games." But he goes by Chet on the blog, which is his real-life nickname too, so that's what we'll call him. Anyway, as he forges ahead, Chet knows the number of games released per year will only increase. "If I don't start rejecting more games or finding other ways to change how I approach the chronology, I'll die before I get out of the 1990s," he says.

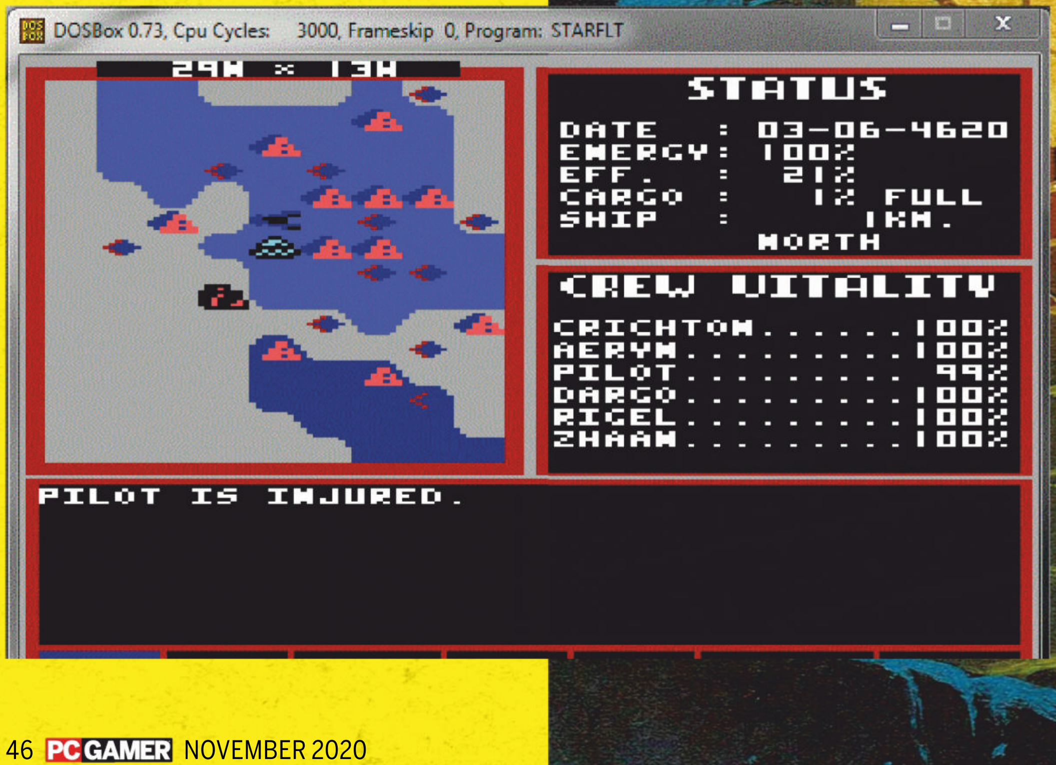
HISTORY LESSON

Still, he probably knows more about the first 15 years of the CRPG than anyone alive, not that he takes an academic line on the genre. While he works into his posts a good sense of the context of these games – where they came from and where they've gone next – Chet writes about them very much from a personal perspective, founded on what he values in his favourite genre, a love which began way back in 1984 or so, when he was 11 or 12 and played an RPG called *Questron* on his friend's Commodore 64.

"IT JUST BOWLED ME OVER, THE IDEA OF THE PERSISTENCY OF THE GAME"

"It just bowled me over, the idea of the persistency of the game. The character isn't just alive long enough to fight a few times and then you had to insert a new quarter, you had a persistent character who you could save and it had this epic quest that would take multiple hours over several days of playing, and I ended up taking over his computer and playing for the rest of the day. I think he got mad at me at one point. It became part of my life from that moment on."

That love led Chet to put together a working definition for what makes for a CRPG. It has to have character development, allowing them to get more powerful over the course of a game. Characters' stats should affect



DOSBox 0.73, Cpu Cycles: 3000, Frameskip 0, Program: STARFLT

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29N x 13H

STATUS
DATE   : 03-06-4620
ENERGY:  100%
EFF.   :   21%
CARGO  :    1%  FULL
SHIP   :        1KM.
         NORTH

CREW  VITALITY
CRICHTON.......100%
AERYN..........100%
PILOT..........  99%
DARGO..........100%
RIGEL..........100%
ZHAAN..........100%

PILOT IS INJURED.
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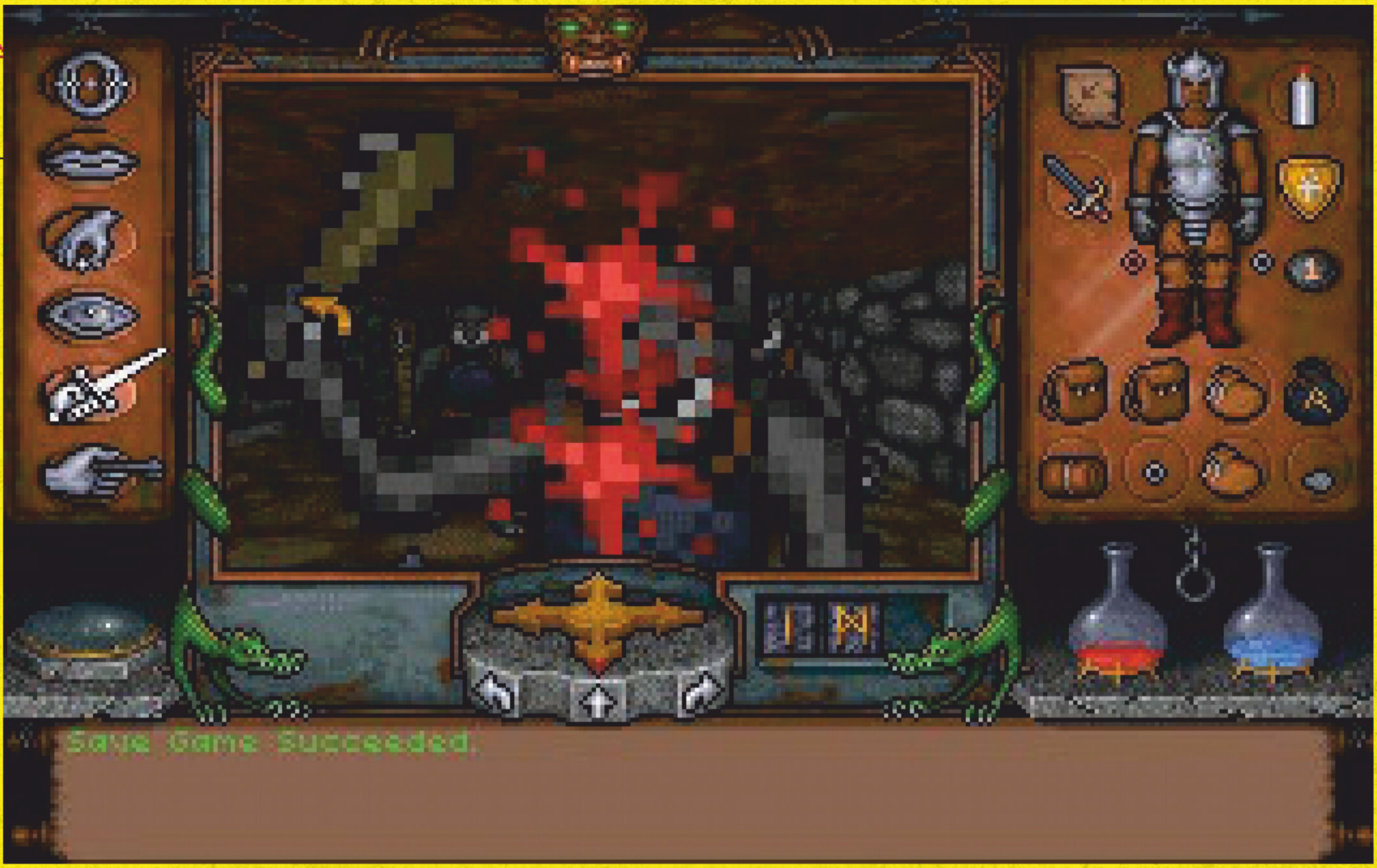
BOTTOM LEFT: Sci-fi RPG *Starflight* (1986) is celebrated for its open-ended exploration and naturalistic NPC behaviour.



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Save Game Succeeded.
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ABOVE: *Ultima Underworld* looks extra groundbreaking in the context of the games released around it.

how well they fight, as opposed to pure player skill. And there has to be an inventory which allows you to choose items to use, wear, and wield. Along with the cardinal rule of no console games (which he broke when he played *Final Fantasy*), these rules determine the list of games Chet has set for himself to play. "I haven't otherwise fully played an RPG on my computer in over ten years that I didn't play as part of my blog."

On top of these core characteristics, Chet has also developed a keen sense for what he values in CRPGs, namely a balance of a wide world, a sense that your characters are a part of that world, and a richness to the things that you do and what happens in that world. He likes descriptions of weapons in your inventory and good NPC conversations, however he says he could do without voiced dialogue. All these factors, which aren't exactly controversial, come together in a rating system which Chet set up a couple of months after starting CRPG Addict, which kind of is. Named GIMLET after his favourite cocktail (and charmingly awkwardly made to stand for Game Innovation, Merriment, Likability, and Engagement Test), it features ten characteristics, which rate things like game world (lore, whether it reflects your actions), economy (whether there's good stuff to buy), gameplay (difficulty, linearity, pacing), and each contributes up to ten points to an overall 100-point scale.

TEXT ADVENTURERS

Shut it, Zuckerberg – blogs aren't dead yet

Chet isn't the only in-depth game history blogger around. There are others who match his ambition and commitment, and who've adopted his template to cover some of the other genres out there.

DIGITAL-ANTIQUARIAN

filfre.net

Jimmy Maher's exhaustive history series tells the surprising and often dramatic stories behind some of the most legendary gaming series.

THE ADVENTURE GAMER

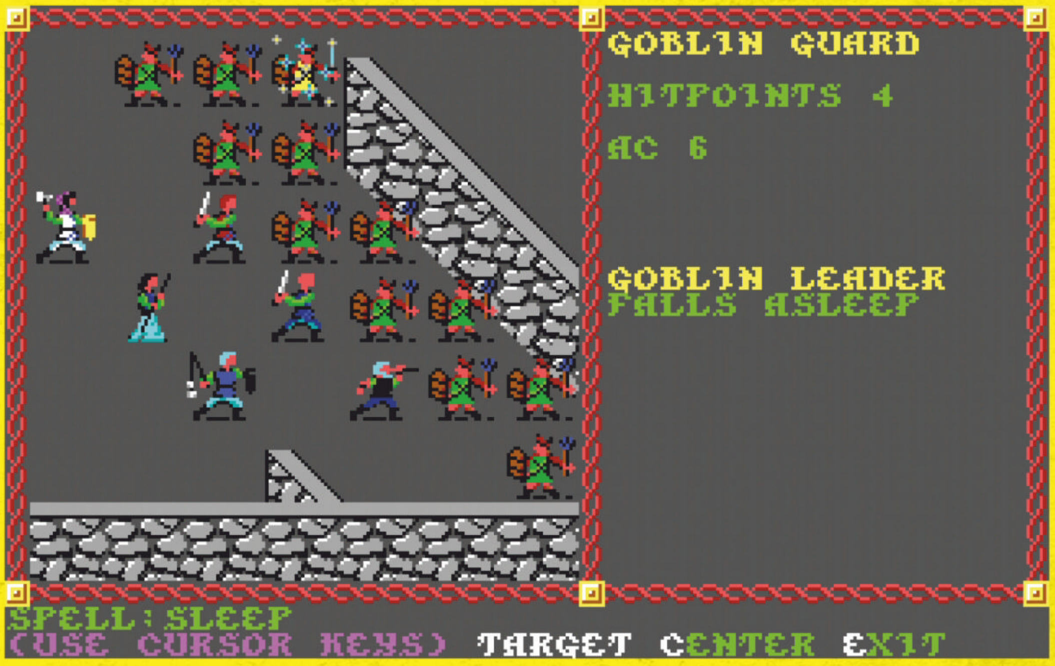
advgamer.blogspot.com

Founded in 2011 with the idea of doing CRPG Addict for adventure games, but now written by a group of contributors.

DATA-DRIVEN GAMER

datadrivengamer.blogspot.com

Just started in 2018, writer Ahab traces the ancestry of leading games and then plays each one in order.



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GOBLIN GUARD
HITPOINTS 4
AC 6

GOBLIN LEADER
FALLS ASLEEP
SPELL: SLEEP
(USE CURSOR KEYS) TARGET CENTER EXIT
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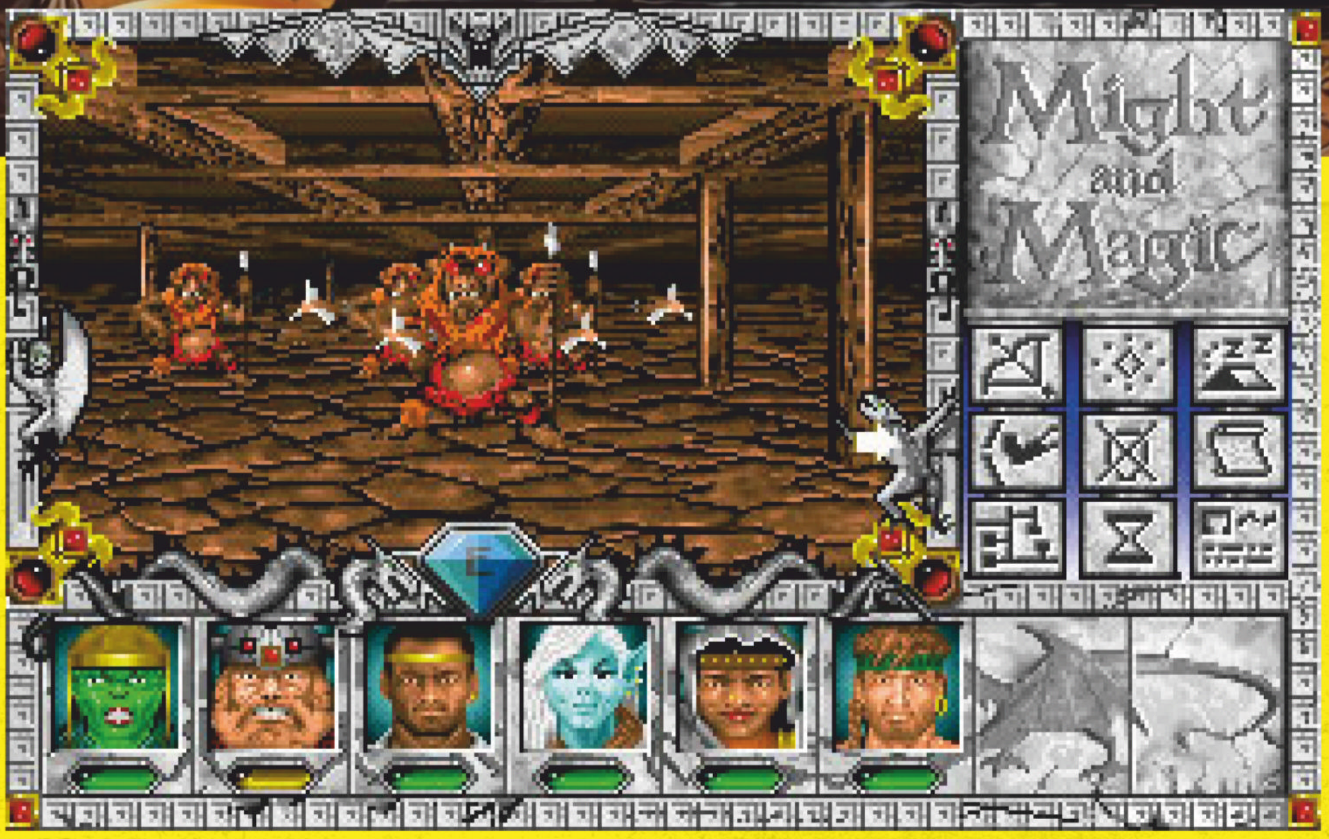
BELOW: Gold Box's *Pool of Radiance* (1988) is one of CRPG Addict's highest-rated games.



ABOVE: *Might and Magic III* (1991) took Chet 68 hours to complete, covered across ten posts.

"It was my attempt to quantify what I enjoy about games and give them a relative ranking," says Chet on the GIMLET scoring system. "But it causes more strife than it should. People look at something quantitative and think it's supposed to be objective, so they start arguing about scores. I'm considering throwing the whole thing away because it creates all kinds of tension when I don't intend it. I just want to be able to quickly sort my list and say, all right, which games have the best story, or the best approach to character development? Maybe I should leave the individual scores and take out the total? I don't know."

HIGH SCORE

Still, GIMLET makes for some fascinating discussion of games, such as in his recent summing up of *Ultima VII: The Black Gate*, which we all understand as a milestone in CRPG design with its dynamic time-of-day NPC interactions and deep detail. GIMLET rated it 51 out of 100. "I want to thank those of you who are departing my blog at this point; it's been nice having you as readers," Chet wrote.

You may have forgotten *Ultima VII*'s terribly chaotic combat, the weird scale of its world, the lack of choice, the infinitely respawning enemies – "*Ultima VII* is a perfect example of a game that perhaps adding up its various parts doesn't create a score that's representative of the quality of the game," says Chet, who loved the game, just as he loves the *Ultima* series as a whole. (*Ultima VI* holds the highest GIMLET rank for gameplay and graphics, sound, interface, while *V* holds the highest for NPCs and economy.)

This isn't to suggest that CRPG Addict is a hotbed of score arguments and ire. Quite the reverse; its comments and community are great. "If you just read my entries and not the comments, you're only getting half the blog, because a lot of stuff gets filled in," says Chet. "There's quality material there." In fact, one of the most charming things about CRPG Addict is that it has the air of the fabled old web, when we'd surf niche interest sites and get to know like-minded nerds. "I feel like I've been lucky since the beginning," says Chet. "I think it helped that I came up with the idea from posting on Reddit about having won *Rogue*, and someone suggested I started a blog covering my experiences, and that day I started, and I got some of those readers immediately."

BLOG JAM

Chet had immediately seen the blog as an outlet for the hours he was

> **“THERE’S NO QUESTION THAT I SPEND MORE TIME ON IT THAN I SHOULD”**

already spending playing games. “I was very concerned about how much time I spent on gaming. Trying to give it up probably wasn’t going to work for me, so I tried to legitimise it by turning it into a project, something I could make a list, make notes, and have some tangible outcome. I’m not just burning four hours, I have a result that people read, and now they contribute money to me through Patreon, which helps me feel even better about the whole thing.”

Still, in 2012 he gave up on the project. He was incredibly stressed out with work. “I was probably chronically late on two or three things and I think I was on a bit of a low point in terms of the games I was playing. Nothing was really gripping me; the blog began to feel more like work than my real work, which I needed to prioritise.” But he’s now slightly embarrassed by the whole episode, because after taking a holiday he found himself wanting to return, realising he just needed a break. “I wouldn’t say it’s healthy, though. I’ve always said that calling it the CRPG Addict wasn’t entirely a joke, and there’s a dark side to it. There’s no question that I spend more time on it than I should.”

Regardless, as he settles into what he calls quasi-retirement –now teaching at a university and living in a quiet Maine town with a view of a harbour – Chet can only see himself putting more time into the project. But he’s well aware that his completionist attitude can’t persist as he plays on – the annual releases keep swelling and the genre keeps evolving. He bemusedly observes that *Assassin’s Creed* games fit his definition of a CRPG. So he’s not yet sure how, but he’ll need to tighten his terms, or jettison a whole category, such as shareware games. “There’s always going to be more games to cover than I have time, so literally this project will end with my death. Or, the end of blogging, I suppose, if I seem to be shouting at the air and no one’s listening any more.” ■

ENDING IT

Old games weren’t too good at endings

Chet has finished more CRPGs than anyone in history, which gives him a unique view of the art of a good ending. Trouble is, he says that most games up to 1992 had no idea how to finish out an adventure.

ULTIMA V (1988)

“There’s a note in *Ultima VI* about how the mother of one of the characters met the Avatar at the party at the end of Ultima V, but there is no party! You just got shoved through a moongate!”

STARFLIGHT

STARFLIGHT (1986)

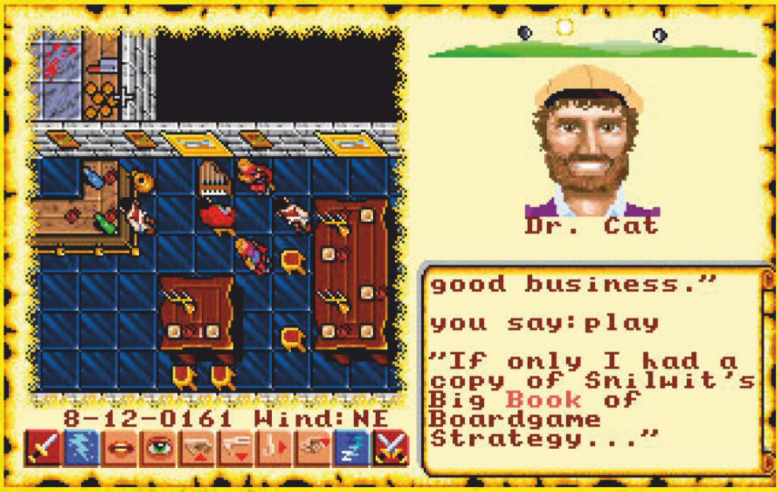
“Although maybe the literal ending isn’t that memorable, the last few hours have some amazing plot development so it’s part of one big ending sequence.”

QUESTRON (1984)

“Charles Dougherty believed in rewarding the player for completing the game so it has this fairly drawn-out ending where there’s trumpets and a procession and the character gets knighted.”

BOTTOM RIGHT: *Ultima VI* is one of Chet’s all-time favourites.

st: 17 ac: 17
ag: 17-16 tl: 18
en: 17 pw: 17
Jera
Wayfarer
5.5 kg.



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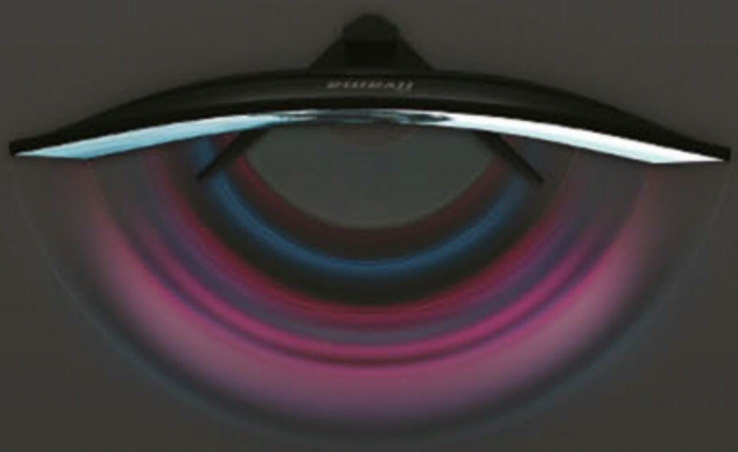

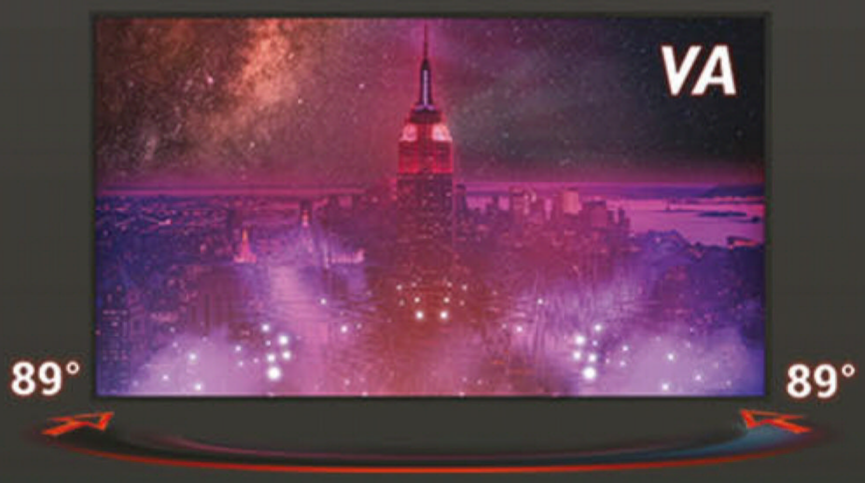

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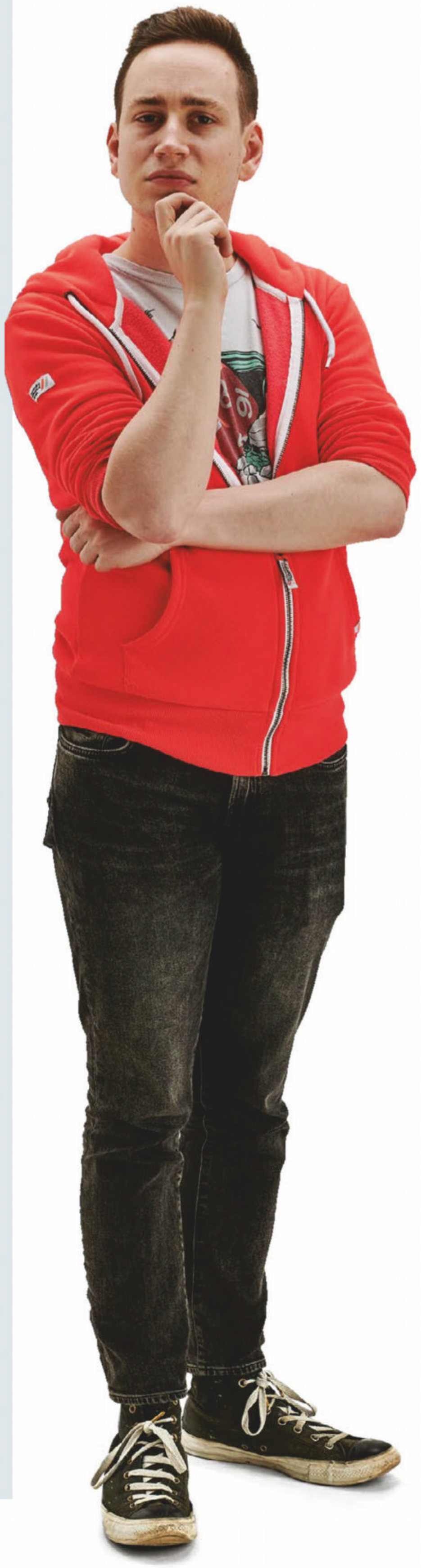
REVIEW

Choice cuts

When I think about the games that have defined PC gaming for me, I think about freedom. Games that offer an incredible array of options and avenues of play, even if that means being more complex and less approachable than console offerings. Sprawling RPGs, detailed simulations and rich strategy games – these sorts of experiences are the bedrock of what makes the platform unique, in my eyes. So it's exciting this month to welcome the release of two games that embody that perhaps more than any game has before: *Crusader Kings III*, which brings an entire medieval world of intrigue, scandal and chaos to life at an incredible new level of detail; and the frankly stupefying *Microsoft Flight Simulator*, which offers the entire Earth as its playground. All that freedom, packed into a box that sits on your desk. Maybe 2020 isn't so bad after all.

Robin

ROBIN VALENTINE
PRINT EDITOR
robin.valentine@futurenet.com



LET US KNOW WHAT YOU THINK
Email us via letters@pcgamer.com with your reactions, or simply tweet us your thoughts @PCGamer

HOW WE REVIEW

We review each game on its own merits, and try to match it to a reviewer who's a passionate expert in the field. The main aim of reviews is to help you make buying decisions. To this end, we're selective about what we review, and try to focus on the notable, interesting, exciting or surprising.

DOWNLOADABLE CONTENT

DLC might be new missions for a game, or it might be a single new item. If we think you want to know about it, we'll review it.

EARLY ACCESS

Any released alpha, beta, or otherwise unfinished game that you can currently pay for. For these games, we won't assign a score, but we will tell you whether they're worth your time.

THEY'RE BACK

Whenever there's a bargain or re-release of a significant game, our expert will revisit it and tell you whether it holds up today. With jokes.

OUR SCORING SYSTEM EXPLAINED

00%-09% Broken or offensively bad; absolutely no value.
Example *Leisure Suit Larry: Magna Cum Laude*

10%-19% We might be able to find one nice thing to say about it, but still not worth anyone's time or money.
Example *Gettysburg: Armored Warfare*

20%-29% Completely falls short of its goals. Very few redeeming qualities.
Examples *Family Guy: Back to the Multiverse*

30%-39% An entirely clumsy or derivative effort. There's little reason to play this game over a similar, better one.
Examples *Trials of the Blood Dragon*

40%-49% Flawed and disappointing.
Examples *Aliens: Colonial Marines*

50%-59% Mediocre. Other games probably do it better, or its unique qualities aren't executed well.
Examples *Primordia, Homefront: The Revolution*

60%-69% There's something to like here, but it can only be recommended with major caveats.
Examples *No Man's Sky, Ghost Recon: Wildlands*

70%-79% A good game that's worth playing. We like it.
Examples *Prey, NieR: Automata*

80%-89% A great game with exceptional moments or features, and touches of brilliance. We love it.
Examples *Overwatch, Night in the Woods*

90%-94% A compelling recommendation for most PC gamers. Important to PC gaming, and likely ahead of its time.
Examples *Bayonetta, Dishonored 2*

95%-96% Far and away one of the best games we've ever played. We recommend it to the entire world.
Examples *Half-Life 2, Kerbal Space Program*

97%-100% Advances the human species. Boosts the immune systems of nearby children and small animals.

PC GAMER EDITOR'S CHOICE

The Editor's Choice award is granted in addition to the score, at the discretion of the PC Gamer staff. It represents exceptional quality or innovation.

Find out more
www.bit.ly/pcgreviews

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This month's robot-huntin' reviewers…

FRASER BROWN

Specialist in
Living in the past

Currently playing
Crusader Kings III

This month
Wrote ten full pages of historical strategy review content. You're welcome.

JODY MACGREGOR

Specialist in
Toaster repair

Currently playing
Wasteland 3

This month
Tried to put so many snow puns in his review that we had to give him the cold shoulder.

RACHEL WATTS

Specialist in
Melancholy cuteness

Currently playing
Spiritfarer

This month
Became a sort of friendly grim reaper, which is kind of how we've always seen her.

PHIL IWANIUK

Specialist in
The entire world

Currently playing
Microsoft Flight Simulator

This month
Flew over his own flat, and went "Look, that's my flat!" to no one.

TOM HATFIELD

Specialist in
Coffin upkeep

Currently playing
Immortal Realms: Vampire Wars

This month
A mysterious new strategy game sucked the life out of him.

TOM SYKES

Specialist in
Wet Ass Property

Currently playing
Waterworks!

This month
Discovered the thrills and spills of proper water infrastructure management.

MATT ELLIOTT

Specialist in
Tokyo drifting

Currently playing
Yakuza 0

This month
Hung out with gangsters, ninjas, samurai and schoolgirls.

DETHRONED

CRUSADER KINGS III is in charge now.

By Fraser Brown

I've become completely tangled up in *Crusader Kings III*'s plots and family trees. It's my jailer, keeping me far too busy orchestrating murders and becoming pen pals with the King of France to leave the flat. I should probably do something about that, but I've got this succession crisis to sort out. You know how it is.

There never feels like a good time to step away from Paradox's grand strategy RPG. It's One More Crisis Syndrome and I've got it bad. Anyone who's played *Crusader Kings II* should be familiar with the ailment and well-prepared for the sequel. Once again, you're the head of an early medieval dynasty, and you'll try to keep it trucking for as long as you can by click, click, clicking on an elaborate map and a big stack of menus. Your tools are diplomacy, intrigue, warfare, and luck, and your goals are whatever whims your mind conjures up.

> **Your tools are diplomacy, intrigue, warfare, and luck**

Like all grand strategy games, it's cursed to look incredibly imposing, but this is the friendliest of the bunch. It's shed none of its complexity, but it's much better at showing how everything is connected. On top of a serviceable tutorial that gets you started in Ireland, there's an encyclopaedia and a seemingly infinite supply of tooltips. Even the tooltips have tooltips. Getting advice is like stepping through a portal into a dimension constructed purely out of tips on how to lead a medieval dynasty, which turns out to be quite helpful.

Don't get too hung up on that stuff, though. You can obsess over numbers and powergame your way through history, or you can go on an experimental journey to create a matriarchal society in North Africa founded by Vikings, but you don't need epic ambitions to get the most out of *Crusader Kings III*; all you need is a dysfunctional family.

KING'S QUEST

Imagine *The Sims*, but you've got 20 people in your house, half of them have virulent STDs, and the others are plotting a coup. It's a glorious mess. Your dynasty doesn't exist in a vacuum, either, and will constantly collide with other families and courts, but you can burn through plenty of hours just mucking around with your domestic affairs and securing your grip over your realm.

Crusader Kings has always been about characters instead of nations, but they've never seemed so rich and so maddeningly real before. Each of them is full of agency and ambitions and will more often than not act out when they don't get their way. They might be greedy, cruel, pious, horny, perpetually drunk – if you're looking for an adjective, you'll find it. Everything has a root cause, something that the trait can be traced back to, like a childhood bully or a battle that went badly, creating characters moulded by their pasts.

They start developing before they're even born. Parents can pass on congenital traits to their children that can be strengthened over generations, letting you promote things like intelligence and symmetrical features through arranged marriages and bad science. Inbreeding is one way this can be done – a perfectly normal thing to write in a videogame review – but that's a ticking time bomb. One of my rival dynasties ended up almost destroying itself by keeping it all in the family, which made a whole generation almost entirely infertile. Big Game of Thrones fans.

A long-lived character will accumulate a wide assortment of traits over their life, some of them slightly contradictory, but there are always a couple of reliable core personality quirks that bubble to the surface. Everyone gets an epithet that sums them up, too, so you don't have to trawl through their character sheet to get the measure of them. I'd be Fraser the Tired Critic.

These come in extremely handy when you're setting up marriages or considering someone for a job on your council. You don't want your

»

NEED TO KNOW

WHAT IS IT?
A grand strategy RPG driven by messy nobles and constant drama

EXPECT TO PAY
£42

DEVELOPER
Paradox Interactive

PUBLISHER
In-house

REVIEWED ON
GTX 1080Ti, Intel i7-8086K, 16GB RAM

MULTIPLAYER
Yes

LINK
crusaderkings.com

PC GAMER EDITOR'S CHOICE

FAMILY MATTERS *Great starting points for your first dynasty*

MUNSTER
DESMOND

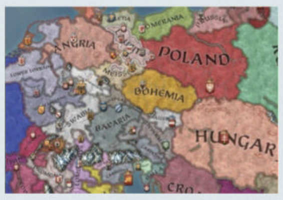
IRELAND

Playing in Ireland became the unofficial way to start *Crusader Kings II*, and now it's enshrined as a proper tutorial. Even returning players should consider trying someone like the Duke of Munster in 867, even if they skip the tutorial bits. It's a good place to expand in peace for a while.

DAR AL-RIH
DARFUR
KORDOFAN

DARFUR

The Chiefdoms around Darfur control a strip that goes across Africa, with only impassable terrain to the north and south. On both sides are lots of independent realms with different religions and cultures, and that means opportunities. Maybe you can pick them off, or you can try to unite them.



HOLY ROMAN EMPIRE

You haven't lived until you've tried to get stuck into the scrum that is the Holy Roman Empire. Don't go for the Emperor straight away; pick a peripheral duke instead and sneak or sweet talk your way into power. This is where you can really use the intrigue system.

BRITTANY
FRANCIA

VIKINGS

Vikings always have more fun than everyone else, especially Jarl Haesteinn. He's rich, starts with a couple of big personal armies and has superhuman combat skills. Leave Brittany behind and set up shop somewhere full of plump targets. Africa's fun, or you could try Italy.

marshal to be an irrational craven – unless you think it'll be a laugh – and a marriage with a resentful villain probably won't be a very happy one.

Sometimes they seem almost bespoke. All their stories are random, emergent narratives, but then you get these arcs that just seem too perfect. There are characters who go on these journeys taking them from nobodies to kings, full of surprise twists, heroic comebacks, secret romances – the lot of it. In that way *Crusader Kings III* doesn't really need us at all.

To really make a mark on the world, as well as keeping your unruly dynasty in check, you first need to focus on beefing up your ruler and hitting some personal milestones. Thankfully, there's always one event or another hurtling towards you with opportunities for growth. You might walk into your bedroom one night and find a member of your court molesting one of your shoes, at which point you can chase them out or call the guards, but you might instead decide that, actually, fondling random objects is very much your kind of thing. And voila, you've got a new hobby. More wholesome events include having a really nice conversation with a new friend and getting a really cool dog.

The price of free will is the constant threat of an existential crisis

LIVE IT UP

Lifestyles let you chisel away at your rulers without having to rely on random events. They're like classes, each representing one of the game's skills. Through their education, everyone has an inclination for a specific lifestyle, but you can pick whichever one you want. Each lifestyle is split up into areas you can focus on, giving you a persistent passive bonus and letting you start to earn XP that can be used to unlock perks from the lifestyle's three trees. Where its predecessor took a lot of inspiration from RPGs, this is a full RPG progression system that's fuelled by stories rather than kills and quests.

The intrigue lifestyle is what I've found myself gravitating towards the most. It gives you a leg up in the murky world of secrets, schemes and hooks, and well as spawning events that let you explore your shady side. I often start with good intentions, but it never takes long before I'm spinning my web. Or at least trying to. On more than one occasion, I've realised too late that I was really the fly.

The lovely Mediterranean powerhouse I'd spent a lifetime building ended up ruined when my big mouth of a brother outed me for killing our other, stupider brother. I did the deed, I'll admit it. I sent my spymaster to dig around for secrets I could use as hooks to make people do my bidding. I seduced my brother's vassal and bribed one of his knights to join me in the plot. And when he was dead, I used the secrets I'd gathered to force my cowed nobles into making shitty deals and giving me more cash. So when my surviving brother found out about the deed, he tried to blackmail me and, failing that, told everyone. All my vassals with their bruised egos rose up against me, naturally and I met a very nasty end. That's what I get for dragging my 70-year-old ass into the battle.

BEST STRESSED

The most insidious threat to a ruler is stress. It's what keeps you honest. Or cruel. Or greedy. You gain stress whenever you act against your personality. If you're chaste and you start rolling around in the hay with a courtier, you're going to be wracked with guilt. It's sneaky. It got me once just because I thought about my deceased best friend. Boom – I'm feeling stressed. I hit the bottle to push down those feelings, and then I kept hitting the bottle until I looked like gammon. And then I died, again.

Sometimes I'd talk myself into taking a stress hit – it's just poisoning one guy, it's fine, just do it – but it quickly ramps up. There are so many ways that it can kill you, or at the very least make you a completely ineffective leader, so the prospect of getting stressed in a game made me extremely stressed in real life. It's awesome. There's more weight to these choices, more risk, and the price of free will is the constant threat of an existential crisis.

I've always had a problem with RPGs letting you make completely out-of-character choices without any real consequences. You can play Commander Shepard as a paragon of virtue and then turn around and be like, "I'm super xenophobic now, guys" and nobody thinks that's weird. It's fine. Here's some red karma. *Crusader Kings III* will kill your hypocritical ass if you try that shit.

While you can spend incalculable hours wrapped up in roleplaying and intrigue, there's a huge simulated world to paint in your colour. It's a sprawling, kaleidoscopic map that stretches from Iceland to Nigeria to Tibet, and what were often tiny bits of land with few identifying features in *Crusader Kings II* are now large regions with their own character.

Diverse terrain, geographical quirks and special buildings set these areas apart and make some of them very tempting prizes for would-be conquerors, as well as unique challenges. Maybe the fortress you're besieging has monumentally tough walls, or the terrain might put your units at a major disadvantage. The expanded map also means more tactical wrinkles that make fights less of a pure numbers game.

OK, a lot of the time it does just come down to who has the most people willing to die for them. And you'll usually need to chase them and fight them again until they're

DLC DREAMS *We need add-ons to fill some obvious gaps*

ANIMAL KINGDOM

A hidden mode in *Crusader Kings II* lets you play in a world full of intelligent animals. It's amazing. Want to date a dragon? Go ahead. This obviously needs to be a priority for *III*.

CRUSADER KINGS: BATTLE ROYALE

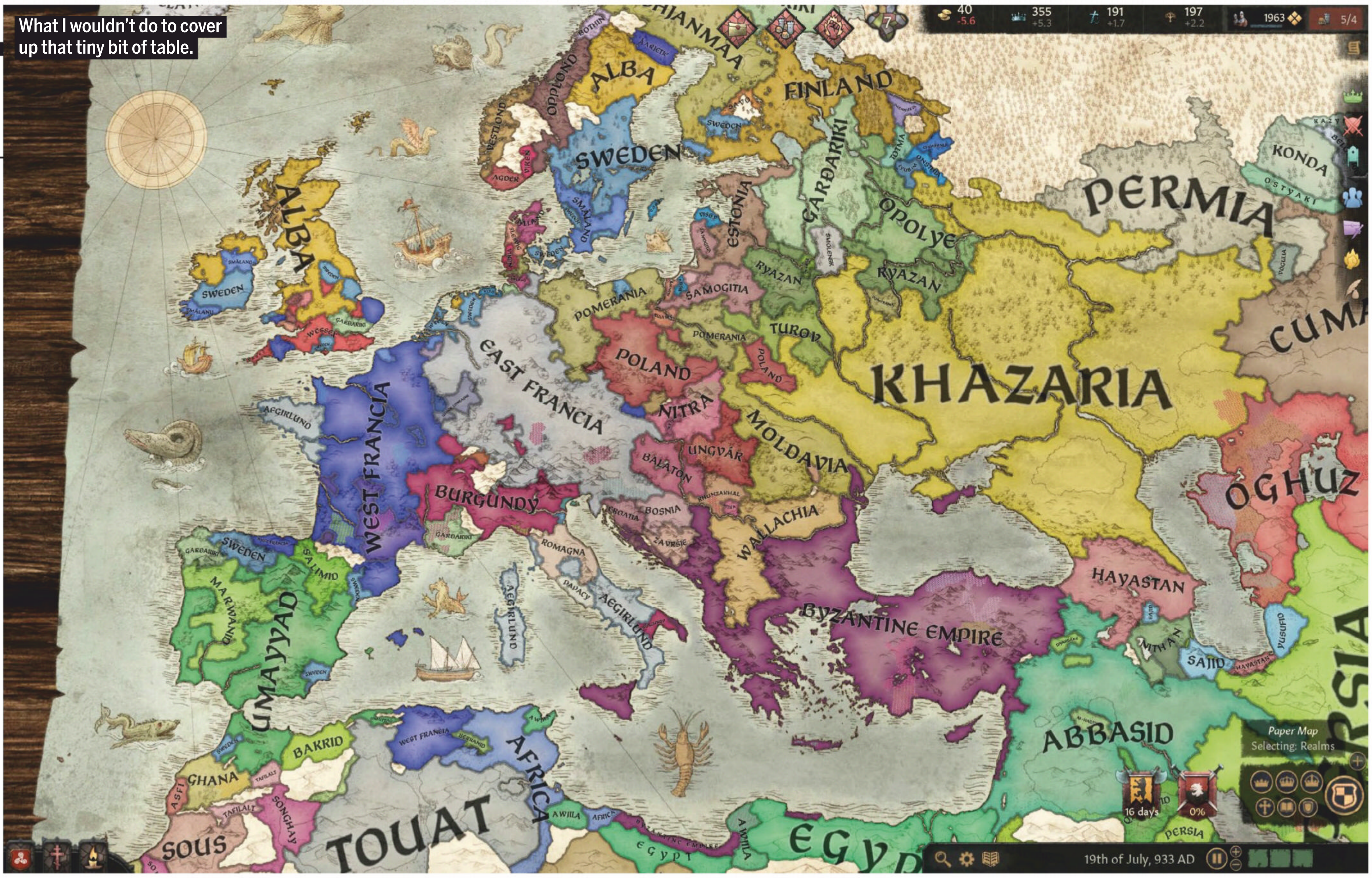
All games will inevitably feature a battle royale mode, so Paradox might as well give in now. One hundred players. A shrinking map. Start fabricating those claims.

CRUSADER BLING

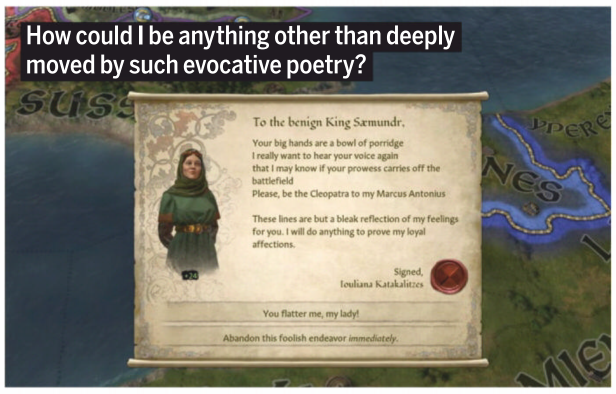
You can dress your rulers up and give them haircuts, but there's so much more that could be added. Toss in some brooches, more hats, sceptres, maybe a bird that sits on your shoulder.

HOME VISIT

Microsoft Flight Simulator lets me fly right to my flat, but that's currently beyond the capabilities of *Crusader Kings III*'s, unable as it is to get updates from Bing maps. Fix this!


ALBA
SWEDEN
FINLAND
PERMIA
KONDA
GARDARIKI
OPOLYE
RYAZAN
ESTONIA
POMERANIA
SAMOGITIA
POLAND
EAST FRANCIA
WEST FRANCIA
BURGUNDY
KHAZARIA
CUMA
OGHUZ
NITRA
MOLDAVIA
UNGVÁR
BALATON
BOSNIA
CROATIA
WALLACHIA
ROMAGNA
AEGIRLUND
BYZANTINE EMPIRE
HAYASTAN
SAJID
UMAYYAD
BAKRID
GHANA
SOUS
TOUAT
AFRICA
EGYPT
ABBASID
PERSIA
Paper Map
Selecting: Realms
16 days
0%
19th of July, 933 AD

What I wouldn't do to cover up that tiny bit of table.



How could I be anything other than deeply moved by such evocative poetry?

To the benign King Sæmundr,

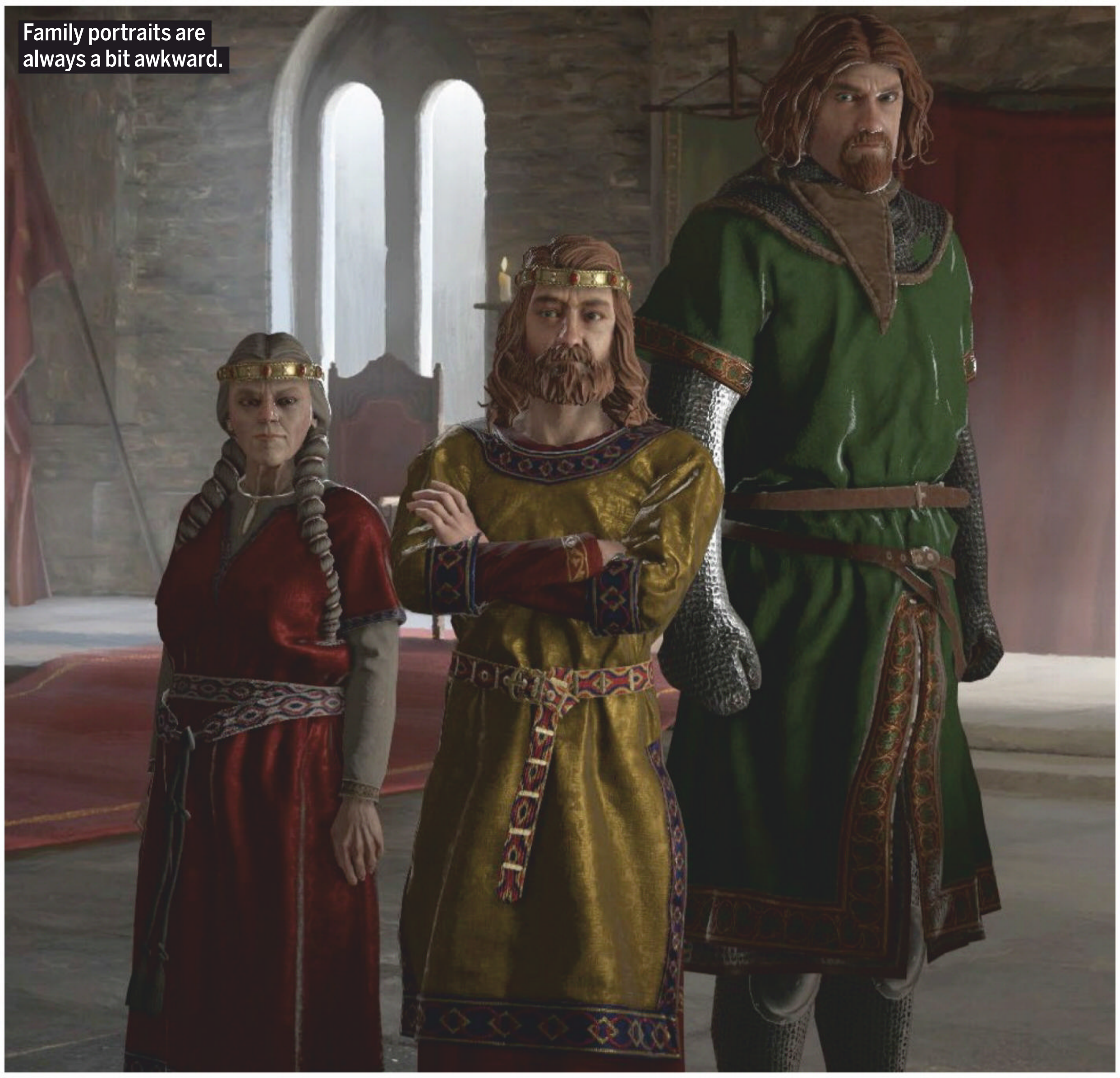
Your big hands are a bowl of porridge
I really want to hear your voice again
that I may know if your prowess carries off the battlefield
Please, be the Cleopatra to my Marcus Antonius

These lines are but a bleak reflection of my feelings for you. I will do anything to prove my loyal affections.

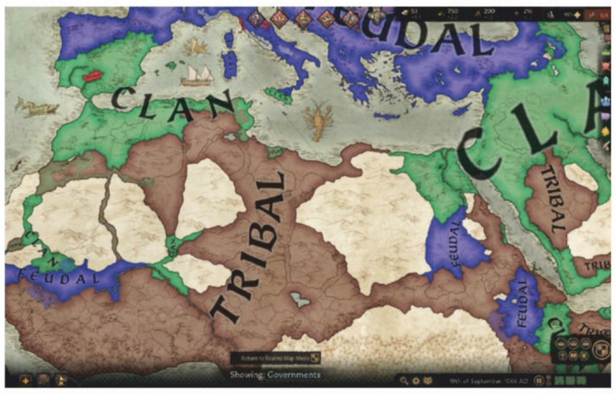
Signed,
Iouliana Katakalitzes

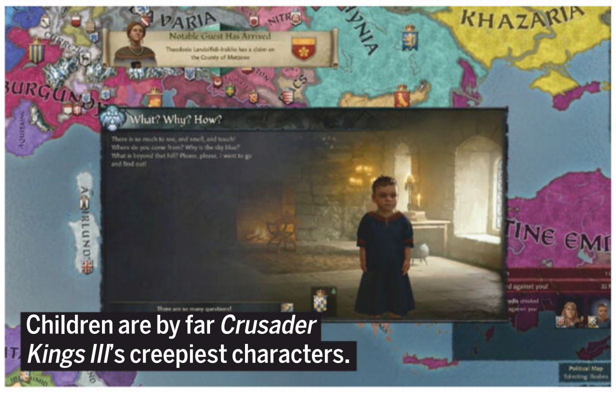
You flatter me, my lady!

Abandon this foolish endeavor *immediately*.



Family portraits are always a bit awkward.


FEUDAL
CLAN
TRIBAL
Showing: Governments



Notable Guest Has Arrived

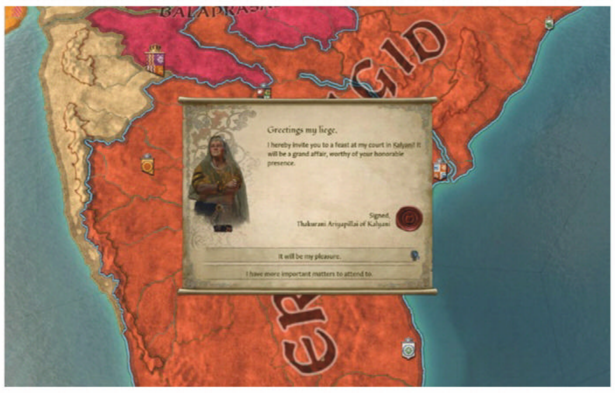
What? Why? How?

There is so much to see, and smell, and touch!
Where do you come from? Why is the sky blue?
What is beyond that hill? Please, please, I want to go and find out!

There are so many questions!

Children are by far *Crusader Kings III*'s creepiest characters.

NORFOLK
SUFFOLK
ESSEX
KENT
SURREY
SUSSEX
DORSET



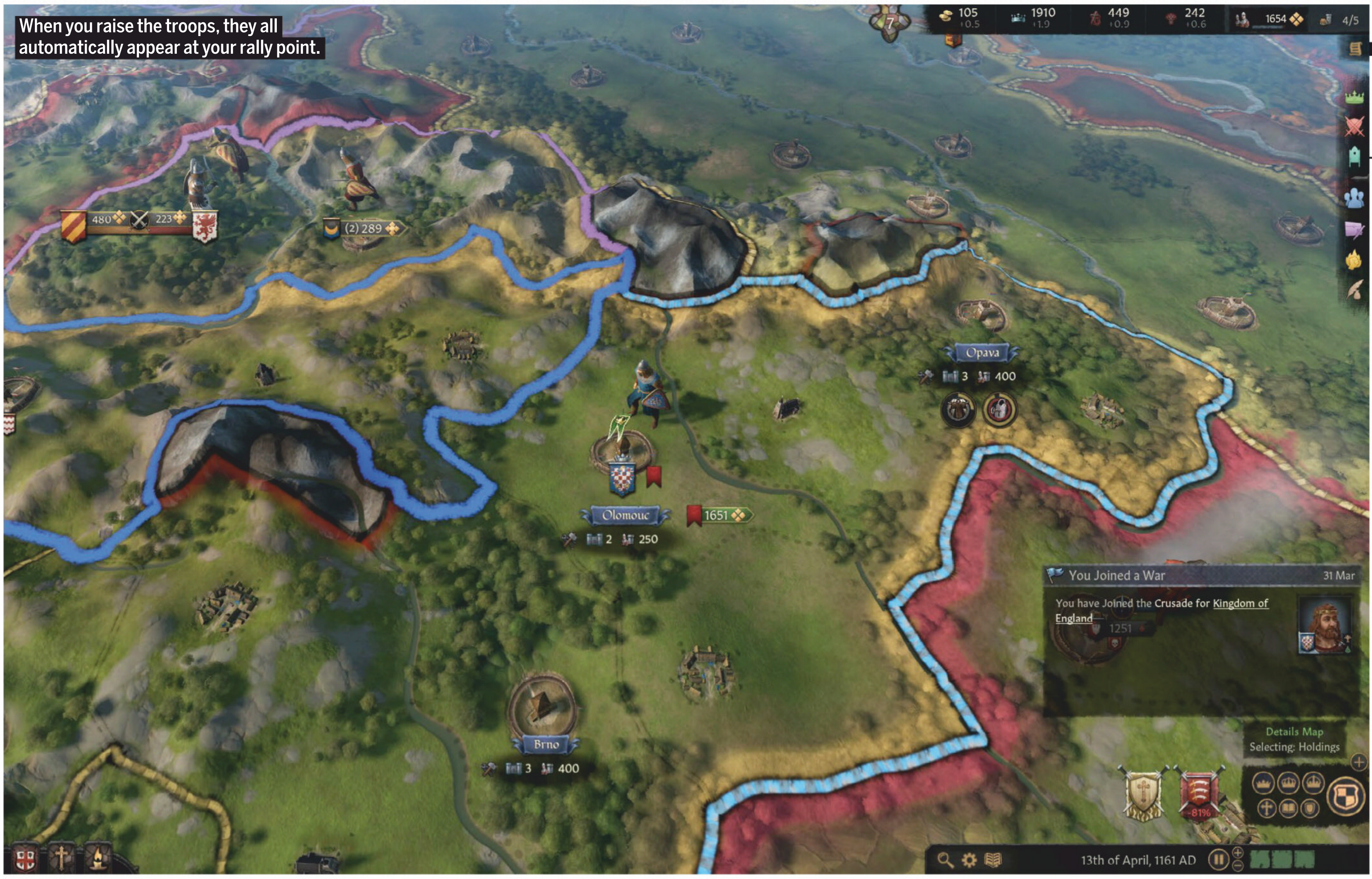
Greetings my liege.

I hereby invite you to a feast at my court in Kalyani! It will be a grand affair, worthy of your honorable presence.

Signed,
Thakurani Ariyapillai of Kalyani

It will be my pleasure.

I have more important matters to attend to.

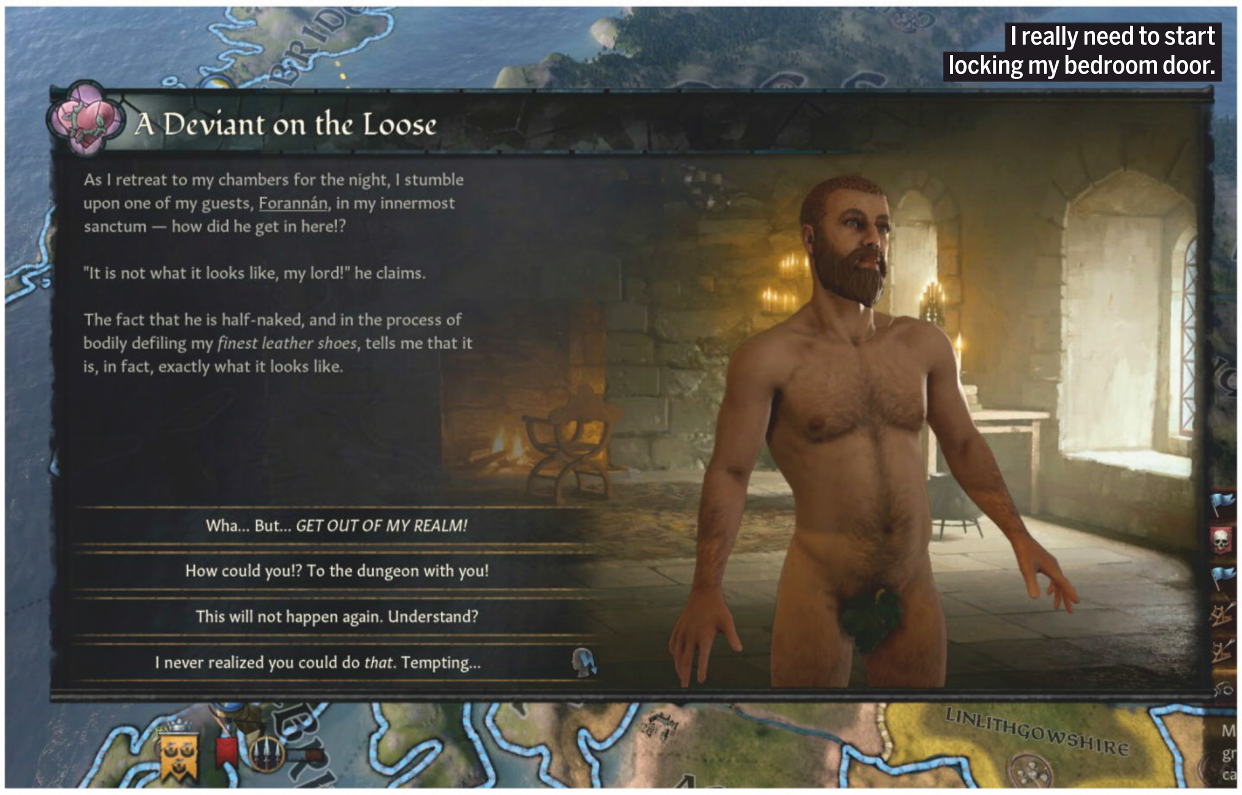


When you raise the troops, they all automatically appear at your rally point.

You Joined a War 31 Mar

You have Joined the Crusade for Kingdom of England

Opava
Olomouc
Brno
Details Map
Selecting: Holdings
13th of April, 1161 AD



I really need to start locking my bedroom door.

A Deviant on the Loose

As I retreat to my chambers for the night, I stumble upon one of my guests, Forannán, in my innermost sanctum — how did he get in here!?

"It is not what it looks like, my lord!" he claims.

The fact that he is half-naked, and in the process of bodily defiling my *finest leather shoes*, tells me that it is, in fact, exactly what it looks like.

Wha... But... *GET OUT OF MY REALM!*

How could you!? To the dungeon with you!

This will not happen again. Understand?

I never realized you could do *that*. Tempting...

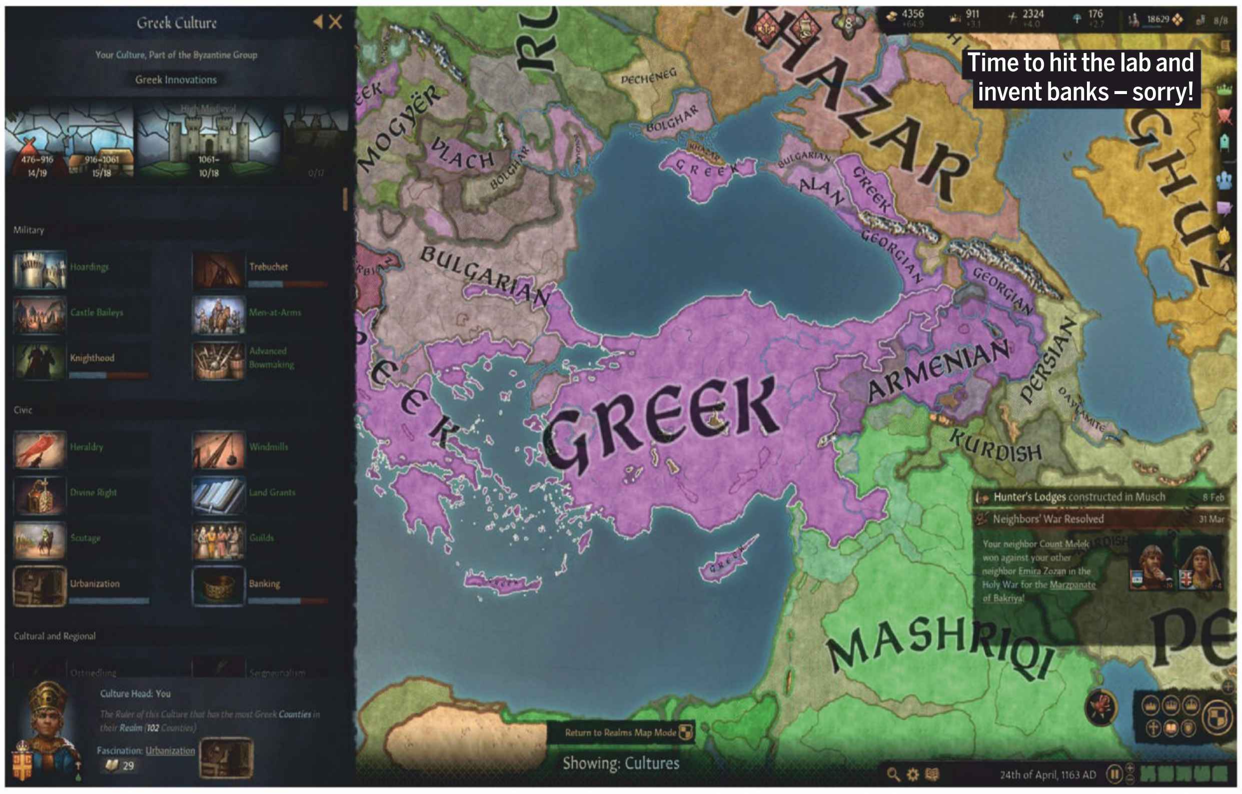
BURGUNDY
AEGIRLUNG

I do love a scandal.

Out of Wedlock
HUNGARY

Things are starting to get odd now.

WEST FRANCIA
POMERANIA
BAVARIA
BALATON
BURGUNDY
BOSNIA
JERUSALEM



Time to hit the lab and invent banks – sorry!

Greek Culture
Your Culture, Part of the Byzantine Group
Greek Innovations
Military
Hoardings
Trebuchet
Castle Baileys
Men-at-Arms
Knighthood
Advanced Bowmaking
Civic
Heraldry
Windmills
Divine Right
Land Grants
Scutage
Guilds
Urbanization
Banking
Cultural and Regional
KHAZAR
BULGARIAN
GREEK
ARMENIAN
GEORGIAN
PERSIAN
KURDISH
MASHRIQI
Showing: Cultures
24th of April, 1163 AD

completely wiped out. It's still *Crusader Kings*. There are more opportunities to get an edge, though, like using knights and more high quality, specialised troops. Knights are like regular members of your court who want titles and legacies and a litany of other things, but they're also brilliant warriors who will wade into battle alongside the army's commander and slice their way through the peasant levies. They're badasses, but as they grow more influential they'll have greater expectations, so your greatest knight could also become your greatest rival.

There are other ways to conquer the world that don't come with the responsibility of managing an empire that spans continents. You can expand your dynasty to every corner of the map without gobbling up every county, using marriage and inheritances to place your relatives in seats of power outside your realm. Powerful members of your dynasty may also form a cadet branch, getting out from under your influence and gaining control over the family members in this new house.

DYNASTY WARRIORS

You're not sacrificing power; you're dividing responsibility. Other houses and independent rulers contribute renown to the dynasty, and as the head that means you're able to throw your weight around and spend that renown on dynasty-wide legacies – think perks, but they're permanent and for the whole family. Eventually you can build a dynasty of warlords or ensure that all the realms under your dynasty's supervision run with machine-like efficiency.

It has been a huge relief to let some other characters do some of the heavy lifting. Leading a dynasty to immortality is exhausting, but now it's a team effort. There are loads of different ways to play *Crusader Kings III*, but it's best when you've got a small or medium realm to worry about, with enough characters so that you've always got some drama, but not so many that your court is filled with strangers. Spreading your dynasty lets you enjoy the hit of power and rush of expansion but doesn't ditch you with a whole host of new administrative problems.

The loftiest ambition, of course, is to make everyone agree your god is the best one, or you could get in on the medieval era's biggest craze: heresy! Yes, if you're bored of Catholicism or another religion, you can just make your own faith. This can cause a lot of instability, piss off the dominant faith and requires a lifetime devoted to piety to pull off, but it's entirely worth it.

Religion in *Crusader Kings III* is vastly influential and usually chock full of rules that ruin everyone's fun. They're strict and way too interested in what people do in their own bedrooms. Your new faith can get rid of all that. Faiths are built out of tenets, traditions that come with special mechanics, and doctrines that determine the legality of things like same-sex relationships, who can become a priest and if divorce is OK. There are 14 doctrines that you have to settle, a trio of tenets to choose from a massive list, and then you've got to decide what traits are virtuous or sinful. You might as well make yourself head of the faith while you're at it, but if you'd rather work behind the scenes you can let others enjoy the majestic glory.

> **It spits out a constant stream of compelling alt-histories**

Making a new faith is a lot like creating a new culture, but there's also a discrete culture system that's tied to innovations. New laws, unique units and special bonuses can be unlocked over time for everyone in the culture, but only the dominant ruler can actually pick what innovations to focus on. Even research becomes another source of competition and intrigue and you try to keep your fellow rulers behind you. Just as new faiths keep popping up, new cultures can also appear and start challenging their more established neighbours.

Crusader Kings III is always in motion, always jumping to new stories, so it never lets you get too settled. But it also never ventures far out of its comfort zone. Paradox hasn't taken it in a different direction or made changes that will elicit any gasps. The stuff that made *Crusader Kings II* so enduring has been pushed to the front even more, while some of the bloat that accumulated over the better part of a decade has been chipped away. It's a very sensible sequel.

I know, I know – 'sensible' is not the most encouraging of words. Let me reassure you, then, that *Crusader Kings III* is incredible. It's an irrepressible story engine that spits out a constant stream of compelling alt-histories, delightfully infuriating characters, and social puzzles that I've become obsessed with. I can't imagine being done with it. I just subsist on digital drama now. Will Alfred finally leave the torture chamber and make a friend? What's Bjorn going to do now he knows his wife is in love with his chancellor? And who's going to be committing patricide next? I need to spend less time writing reviews and more time with my dynasties. ■

PC GAMER VERDICT

With so much going on and different ways to play, *Crusader Kings III* is a triumph. The king is dead, long live the king!

94

BAD RELIGION

Using **Crusader Kings III** *to build a perfect faith for 2020*

SACRED LIES
This tenet makes deceit a blessed art form – snake oil salesmen are considered pious and honesty is forbidden. Time for holy fake news.

HEDONISM
Party like the world is coming to an end with the Hedonism tenet. With gluttony now a virtue, you can get down with your grossest self.

PASTORAL ISOLATION
Maybe you just want to be left alone in a field. Perfectly fine. Everything is shit, so let's just hang out by this tree.

RITUAL CANNIBALISM
Why else would God make us so damn tasty, huh? This is the only logical endpoint for our current trajectory, I reckon.

SNOW JOKE

Make friends with weirdos in cold Colorado in WASTELAND 3

By Jody Macgregor

The *Wasteland* games have always mixed grit with silliness, offsetting slavery and cannibalism with mutant killer bunnies and the like. That's one of the things that hasn't changed in *Wasteland 3*, which is still an RPG where malfunctioning toasters can be cracked open for loot if you've got the Toaster Repair skill, and my squad of hardened wasteland warriors is joined by a goat, a swearing parrot, a cyborg chicken, and a cat who wears a hat.

What's different is the setting. The endless sand of Arizona and California has been traded for the endless snow of Colorado. Your Desert Rangers are way out of their depth here, sent north to cut a deal with the prosperous local leader for supplies your home desperately needs, which means helping the patriarch of Colorado Springs round up his rebellious offspring. Each of his three large adult children have sided with different bizarre factions, from Reagan worshippers to Hispanic murderclowns, and you're thrust into this political shitfight with only your wits, an AI car, a bunch of guns, and those three points you probably shouldn't have put in Toaster Repair.

Wasteland 3 is also less old school than *Wasteland 2*. That was a game where you'd find a loot container then have the character with Perception check it for traps, then a character with Alarm Disarming or Demolitions render it safe, then if it was locked use Lockpicking or Safecracking or Brute Force to open it. Now some of those skills have been excised and if you click on something the character who has the right skill will just automatically interact with it.

> **Only a few of the members of your own party get much personality**

The turn-based combat has been streamlined as well. When you mouse over a position before moving it'll highlight who you can attack from there just like *XCOM 2*, complete with revised percentages over their heads. Gone is the tickertape full of text describing your attacks in favour of a UI that's less diegetic, but easier to get to grips with.

The combat stayed interesting even as I got near the 50-hour mark, which I can't say of *Wasteland 2*. I enjoyed it all the way through, both due to fights that had more twists to them – sometimes you get to bring your car and its mounted cannon, and often you can stealth into position, crouching behind cover before attacking with your character who has the Sneaky Shit skill for bonus damage – and also because the story held my attention.

NEED TO KNOW

WHAT IS IT?
A post-nuclear roleplaying game

EXPECT TO PAY
£55

DEVELOPER
InXile Entertainment

PUBLISHER
In-house

REVIEWED ON
Windows 10, Intel Core i7, 16GB RAM, Nvidia GTX 1060

MULTIPLAYER
Yes

LINK
inxile-entertainment.com/wasteland3

ICE TO MEET YOU

The *Wasteland* games tend to have some interesting factions but not interesting characters. Here I felt a little more attached to NPCs like Scotchmo the alcoholic and Vic the taunting serial killer because I'd seen them up close. It feels more personal.

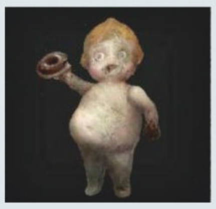
While most conversations play out from a slightly zoomed-in version of the isometric view, some major characters get first-person scenes with mocapped performances full of expressive interactions. They reminded me of the theatrical NPCs of *Vampire: The Masquerade – Bloodlines*, which is high praise.

That said, I struggle to remember the name of the cyborg gang leader or the green-skinned Ranger I recruited. Only a few of the members of your own party get much personality, as there's no way to talk to them except by wandering around hoping to stumble over a conversation trigger. Even the pre-generated pairs of PCs you can choose from if you don't want to make your own aren't chatty.

Like its predecessors, *Wasteland 3* is the kind of game where the most interesting story is the one you make, usually thanks to that juxtaposition of seriousness and silliness. Maybe you created a character who dressed like a clown and inflicted certain status effects on enemies by throwing yellow (it's piss) snowballs at them, or maybe you went into battle with a herd of vicious mutant animals – at least until you got sick of them and abandoned even the swearing parrot to bleed out in the snow. ■

CHILD'S PLAY

Fallout *has bobbleheads,* Wasteland 3 *has creepy dolls that boost your stats*



MANEATER MAURY
Like cannibalism, he makes you healthier.

FUCKIN' FRED
This tiny edgelord gives bonus damage against humans.

ELECTRIC EMMETT
Give your energy weapons a damage boost with this lad.

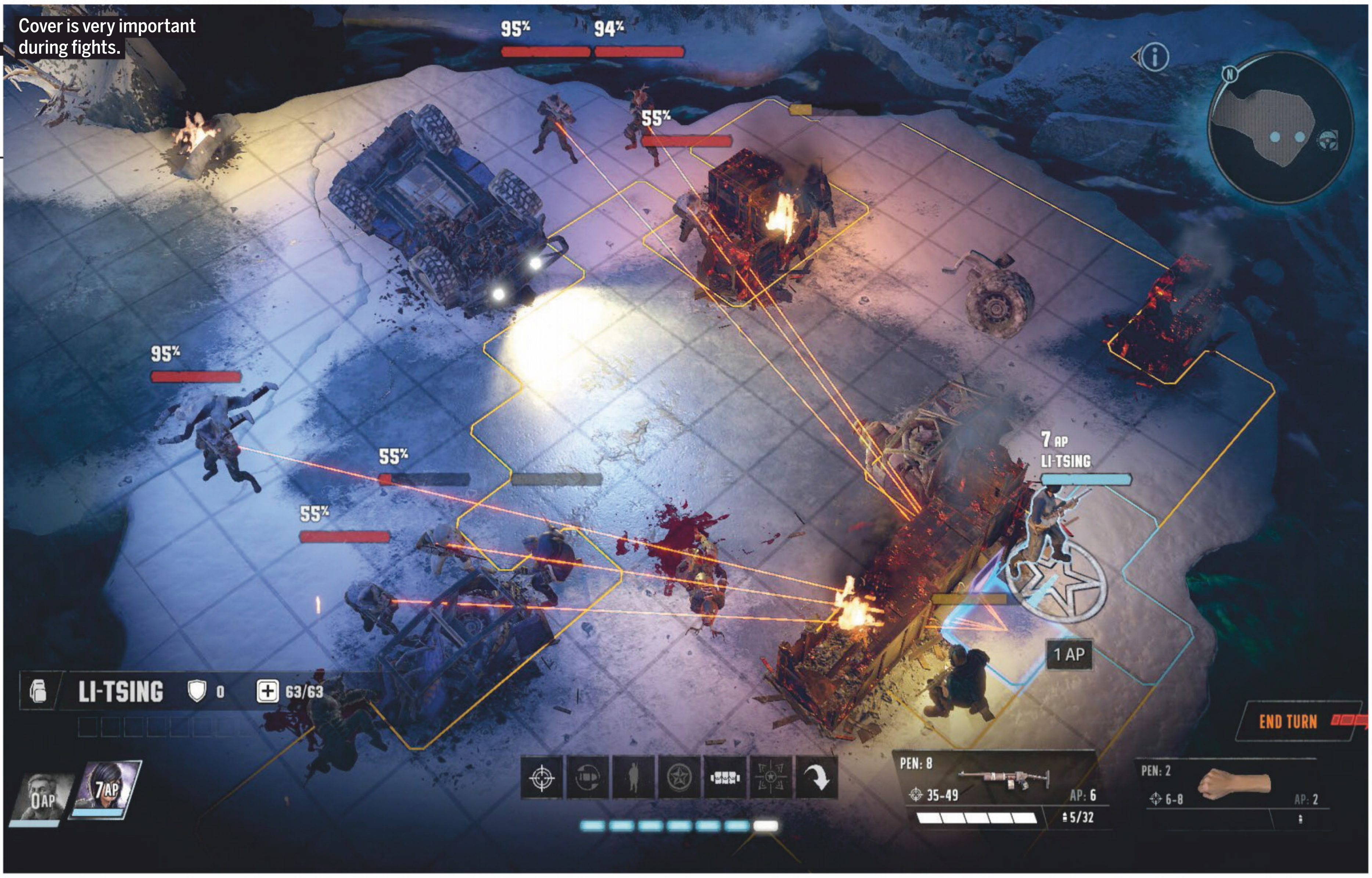
RADICAL RACHEL
Bonus to explosive damage, will quote The Dark Knight.

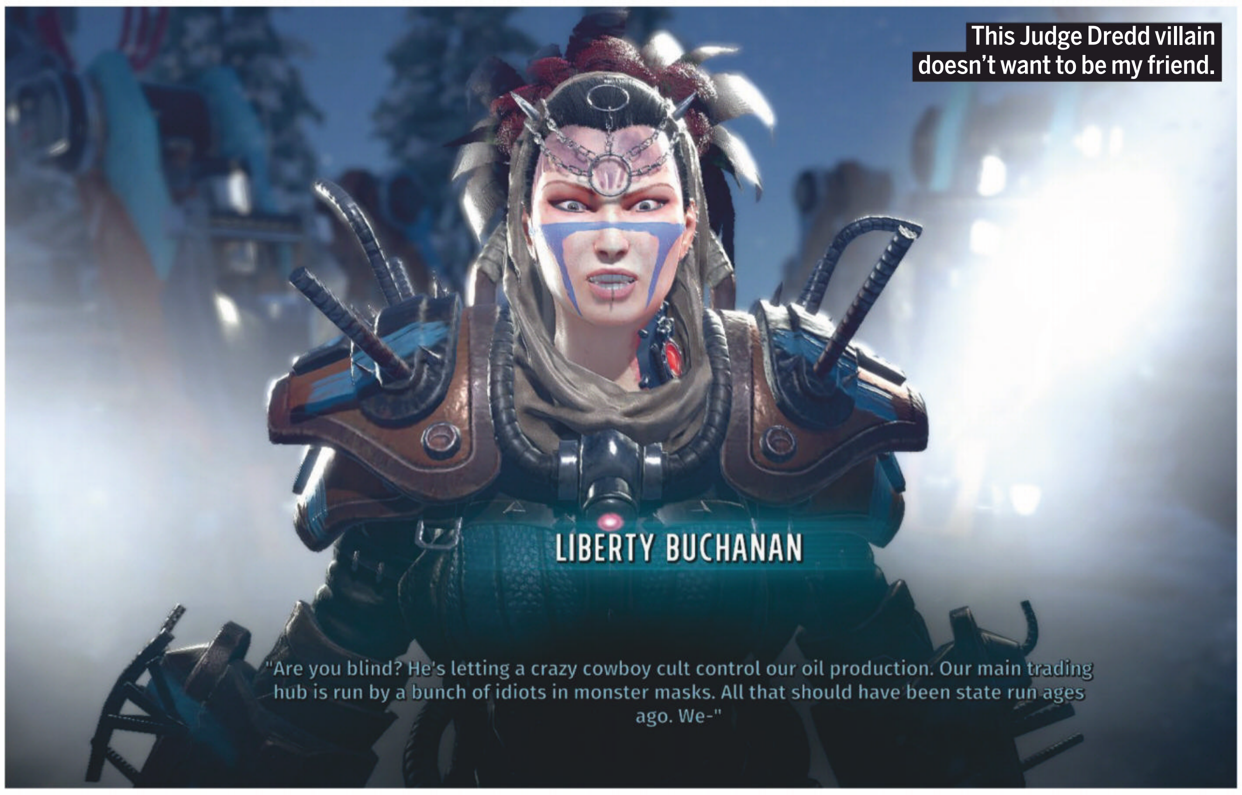
CRUEL COREY
Additional damage caused to animals because *Wasteland 3* goes there.

PC GAMER VERDICT

A strange setting explored through a predictable but enjoyable RPG that's been streamlined just enough.

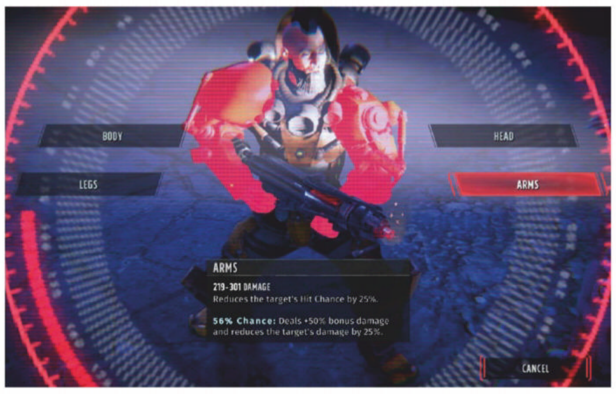
84


Cover is very important during fights.
95%
94%
55%
95%
55%
55%
7 AP
LI-TSING
1 AP
LI-TSING
0
63/63
0AP
7AP
END TURN
PEN: 8
35-49
AP: 6
5/32
PEN: 2
6-8
AP: 2


This Judge Dredd villain doesn't want to be my friend.
LIBERTY BUCHANAN

"Are you blind? He's letting a crazy cowboy cult control our oil production. Our main trading hub is run by a bunch of idiots in monster masks. All that should have been state run ages ago. We-"

Everything's on fire. Again.
MARSHAL KWON
106/106

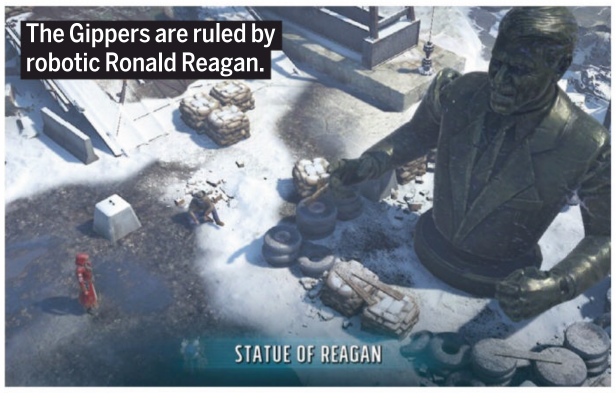

BODY
HEAD
LEGS
ARMS
CANCEL

ARMS

219-301 DAMAGE

Reduces the target's Hit Chance by 25%.

56% Chance: Deals +50% bonus damage and reduces the target's damage by 25%.


The Gippers are ruled by robotic Ronald Reagan.
STATUE OF REAGAN

Meanwhile this discoball is a powerful ally.
FRIENDLY TURN
CYBORG CHICKEN
15
12
15

MYTHBUSTERS

It's not just the earthquakes shaking things up in **A TOTAL WAR SAGA: TROY**. *By Fraser Brown*

The work never stops when you're trying to organise a holiday to Troy with a bunch of your Greek mates. I just want to smash some walls, but I've got soldiers freaking out about bad omens, centaurs that need fed, petulant deities setting fire to shit like bored pyromaniac teens, and people pestering me endlessly about bronze they really don't need. Get your own bronze, Achilles! *A Total War Saga: Troy* never lets up.

NEED TO KNOW

WHAT IS IT?
A mythological *Total War*

EXPECT TO PAY
£35

DEVELOPER
Creative Assembly Sofia

PUBLISHER
Sega

REVIEWED ON
GTX 1080Ti, Intel i7-8086K, 16GB RAM

MULTIPLAYER
Yes (but not until November)

LINK
totalwar.com/games/troy

If you've read any of the Greek epics that serve as *Troy*'s inspiration, you'll know that everyone's a dick, especially the gods. Thanks to some divine meddling, this Orlando Bloom-looking arsehole runs off with Helen, the Spartan queen, and takes her back to the titular city, plunging the Aegean into a brutal war. *Troy* still lets you fight whomever you want, but everyone is ultimately gearing up for this big brawl between east and west.

The eight factions have their own epic quests, but victory only happens when you've destroyed your adversaries across the sea, something that will be a lot easier if you've wrangled your neighbours into a big alliance or swallowed them up. It's an all-encompassing conflict that leads to *Troy* being the most purposeful *Total War* that I've ever played. While you're getting ready for the big showdown, however, there are a whole lot of distractions.

GREEK SQUAD

Troy's shtick is that it's trying to present a more grounded version of mythology. There are minotaurs, centaurs, giants, and more, all of which can be fielded in battle – but really they're all humans. Giants are just big hairy dudes, while centaurs are simply warriors on horseback. There are gods, too, and while you won't see Poseidon swimming around, not showing them the proper respect will lead to disasters like earthquakes and fires. One of my generals got very sad when Aphrodite 'made' his wife cheat on him.

Appeasing the gods means killing loads of bulls in their name, cutting into your food stockpile. As well as keeping them happy, these sacrifices effectively level the gods up, giving you passive bonuses and even letting you recruit new units and agents. Trying to find the right balance and keeping as many gods as possible in your pocket is a tough juggling act, and it's easy to forget about them when you're embroiled in a war, but the extra layer of micromanagement is worth it for the specialisation options it opens up.

> **Resource wars give the early game a lot of momentum**

Food isn't the only resource that you need to worry about. There's wood, stone, bronze, and gold, all used to fund your building and recruitment efforts. The range of resources means that, even if you've got a deficit somewhere, you're probably still going to be able to build or recruit *something*, and it's a rare turn where there's nothing to do. These new resources also create targets, directing the flow of your conquest of the Aegean.

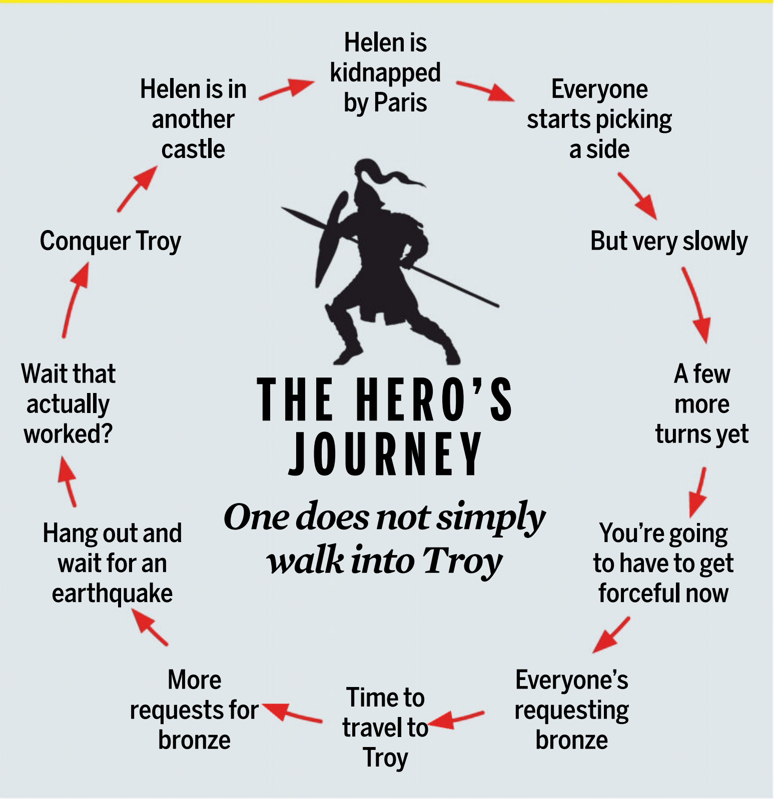
Resource wars give the early game a lot of momentum, but it doesn't last. I finished my first game around turn 100, but I barely had to think about my stores and larders after 40. There are just too many ways to get resources. Unfortunately, that won't stop other factions from constantly pestering you. There's yet to be a *Total War* where the AI won't spam you with requests, but here it's especially egregious. It doesn't matter if they've got a massive stockpile, they'll still come begging.

I'm not totally sure what to make of the AI. On the campaign map, enemies can be the most competent opponents one minute, only for them to spend the next ten turns aimlessly sailing around the Aegean not actually doing anything. This was especially noticeable when I went to war with the Amazons.

TROY FRIENDS

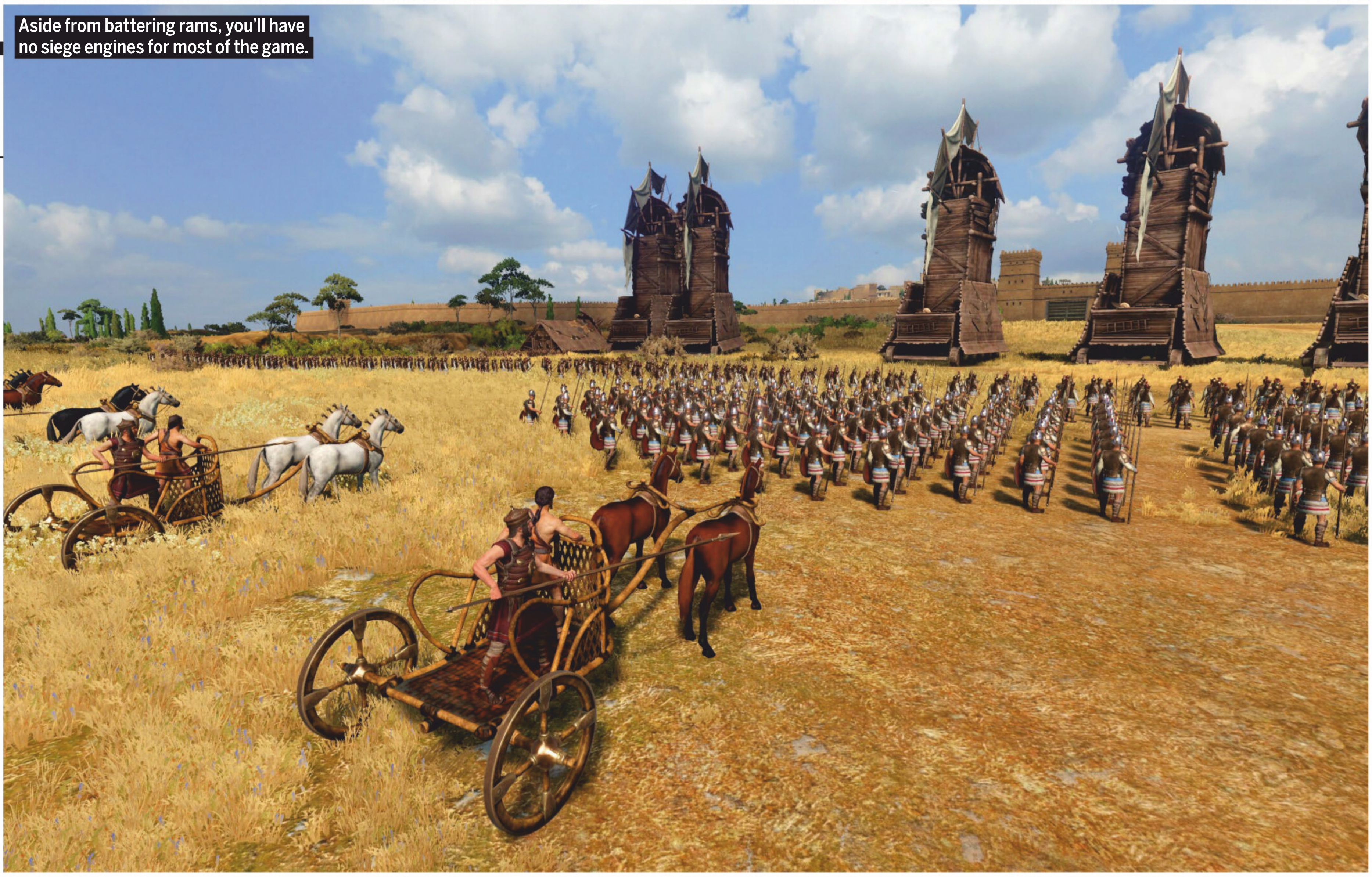
Once you've become a big strategic threat, you're assigned an antagonist. Just like real life! This is another powerful faction that's got some grudges against you, and the only way to win the conflict is through outright annihilation. It's a neat feature that leans into the most aggressive parts of *Total War*, and it means there's a bit more to the conflict than just conquering or defending Troy. The Amazons, unfortunately, never even made it to Greece. The war went on for many turns, but despite being told that they were poised to start sacking all my undefended settlements, they seemed happy to potter around in the sea.

In the real-time fights, the AI seems to have a better handle on things. Armies are less committed to

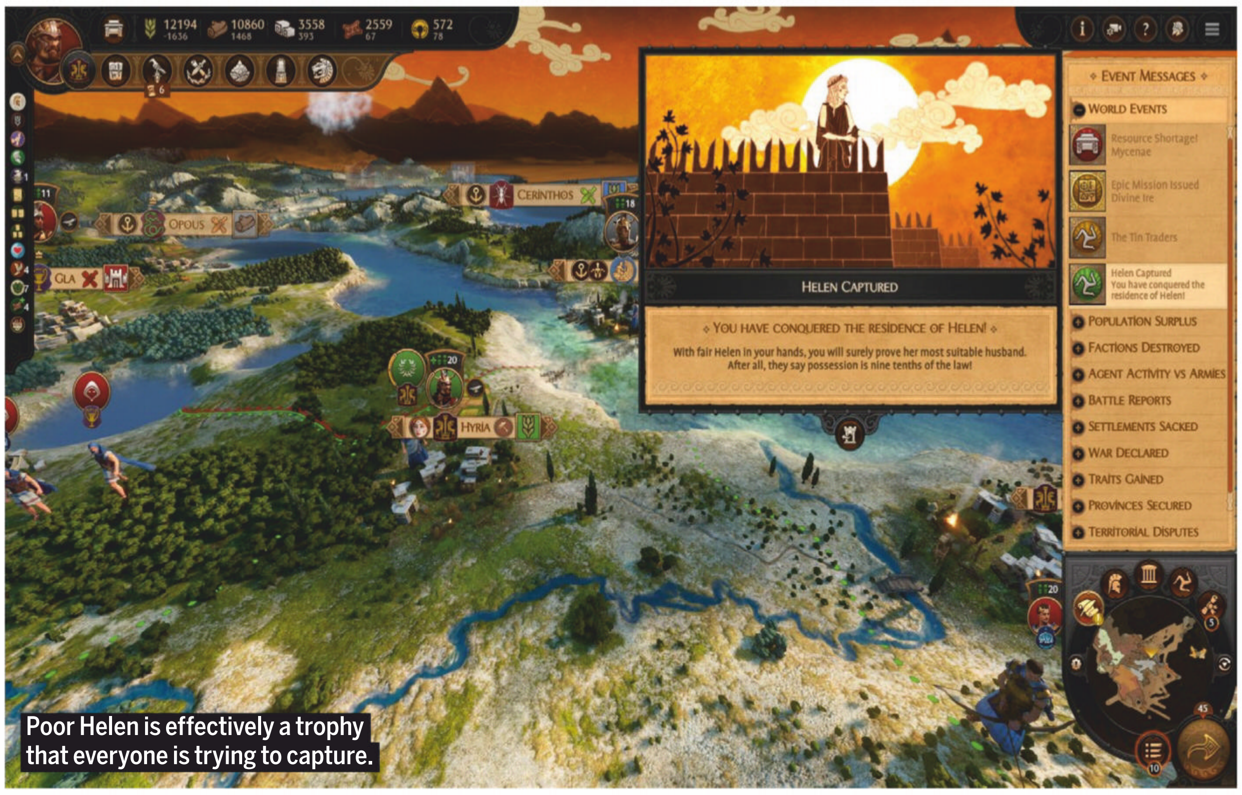

Helen is kidnapped by Paris
Everyone starts picking a side
But very slowly
A few more turns yet
You're going to have to get forceful now
Everyone's requesting bronze
Time to travel to Troy
More requests for bronze
Hang out and wait for an earthquake
Wait that actually worked?
Conquer Troy
Helen is in another castle

THE HERO'S JOURNEY

One does not simply walk into Troy



Aside from battering rams, you'll have no siege engines for most of the game.



12194
10860
3558
2559
572
CORINTHOS
OPOUS
GLA
HYRIA
◆ EVENT MESSAGES ◆
WORLD EVENTS
Resource Shortage! Mycenae
Epic Mission Issued Divine Ire
The Tin Traders
Helen Captured
You have conquered the residence of Helen!
POPULATION SURPLUS
FACTIONS DESTROYED
AGENT ACTIVITY VS ARMIES
BATTLE REPORTS
SETTLEMENTS SACKED
WAR DECLARED
TRAITS GAINED
PROVINCES SECURED
TERRITORIAL DISPUTES

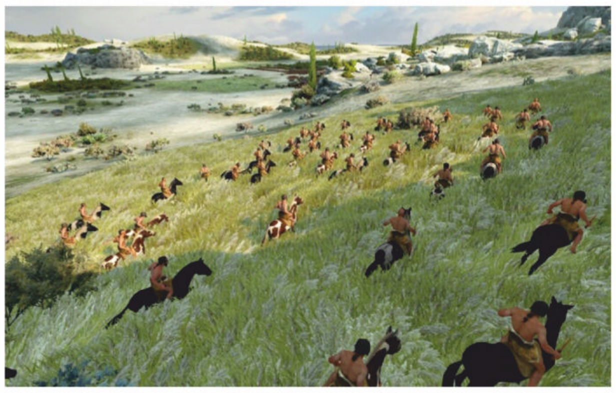
HELEN CAPTURED

◆ YOU HAVE CONQUERED THE RESIDENCE OF HELEN! ◆

With fair Helen in your hands, you will surely prove her most suitable husband. After all, they say possession is nine tenths of the law!

Poor Helen is effectively a trophy that everyone is trying to capture.

It's impressive that nobody ever trips up during these charges.



Typical heroes, showing off in front of their troops.

The war kicked off because Orlando Bloom kidnapped a mime.

There's one rule in *Troy*'s battles: Always Be Flanking.

No time to shave your back, there's a war to win!

It doesn't look like much here, but Troy's a tough nut to crack.

Battle maps are full of chokepoints, which then become full of corpses.

HORSING AROUND *There's no Trojan Horse, but here are some alternatives*

POSEIDON

Of all the gods in *Troy*, Poseidon is the most irate. He's got a beef with the Trojans, so he's got a penchant for causing earthquakes that make it much easier to besiege the city.

A BIG BOAT

Closest to the myth, this method lets you cram units into a horse-headed boat, gift it to the Trojans, and then surprise them at night by throwing them a big, bloody party.

TOWERS

Sieges in *Troy* are usually very low-tech, but for the siege of Troy itself you'll be able to use these towers to get over the walls. And they look a wee bit like horses.

» their strategies and can quickly adapt, leading to battles that have a much more exciting flow. Aside from chariots and special mythological units like the centaur, there's no cavalry in *Troy*. It's all about infantry this time, but the roster is just as diverse. It does mean that veteran players will need to drop some old notions, however, like spearmen being defensive units that protect your army against cavalry attacks. One of the first spearmen units you'll recruit is actually a fast, mobile charging unit that you'll want to rush in with and then pull out quickly – not unlike cavalry. For a *Total War* game, that feels a bit counter-intuitive, so expect some cock-ups before you get used to them.

As well as having roles like charger and defender, units are split up into different weight classes, determining their speed and how they deal with some of the new terrain features. Light units can outrun heavier ones, sprint through mud without getting stuck and get into the perfect position for a flanking attack, while heavy units can take more of a beating and sit comfortably in your front line. A small number of units can also switch from defensive to offensive roles by putting their shields away, increasing their damage output.

This all contributes to battles being more micromanagement intensive, but not to the point where controlling them is too fiddly. You just need to be ready to make adjustments and take advantage of your specialists, finding vulnerable enemy flanks or employing some stealth. Shame about the sieges, then, which just feel like slogs, especially since siege weapons have yet to be invented. I have to say I clicked auto resolve a lot. There's less room for *Troy*'s smart tactics, so they're just dull meat grinders.

> **It's all about infantry this time, but the roster is just as diverse**

Heroes unexpectedly make less of an impression than the rest of the roster, at least in the midst of battle. Leaders and generals have been toned down since *Three Kingdoms*, but otherwise they haven't been changed much. They're like Romance characters, but a bit shit. They have buffs and debuffs – mostly forgettable, apart from the very handy heals – can get into duels and are much tougher than your average warrior, but their impact on battles is considerably less dramatic and they simply aren't as much fun to command.

In the campaign, however, they're the driving force. Their obsession with Helen (who is just a passive stat boost that you can steal), thirst for vengeance and epic quests are all at the forefront, and Creative Assembly Sofia has used these legendary celebrities to define the factions. Achilles is quick to anger, which is reflected in his shit management skills; Paris and Hector both compete for their father's attention, hoping to lead Troy; Odysseus and his warriors are sneaky and cunning ambushers – but really *Three Kingdoms* still did it a whole lot better. Gone is the web of relationships and nuanced personal diplomacy, replaced instead by characters who have plenty of unique traits, sure, but not nearly as much personality.

Troy's maps are a high point, both aesthetically and tactically. They're bright, fantastical things and are evocative of *Assassin's Creed Odyssey*'s impossibly beautiful vistas, and they're full of quirks. Chokepoints, cover, varied elevations and lots of places to hide – more than ever before, terrain feels like both an adversary and an ally. It's unfortunate, though, that mud, sand and tall grass feature so infrequently. They were touted as important new additions, but I hardly fought any battles where there was an opportunity to take advantage of them. The most common is tall grass, but since that just serves a similar function to trees, its impact isn't actually all that noticeable.

Out of battle, the map of the Aegean is even more stunning. It's map porn, squeezing as much visual flair out of the setting as possible. The skybox and distant mountains are even rendered in black figure pottery. I just wish it wasn't full of agents constantly trying to assassinate people and perform religious rituals. Yes, they're back, and yes, they're still a pain in the arse. Spies, seers, priests, envoys, even some one-shot epic agents – there are too many of them, and few of their abilities couldn't be given to generals or off-screen followers. The map's busy enough without them.

Generally, though, the busyness is part of the appeal. Trying to bring all your neighbours together for a big war, managing the petulant gods and building up a massive war chest is engaging stuff. It's only once you've become really established that the economy and diplomacy becomes largely superfluous, and then the cracks start to appear. And even then, it never completely falls apart.

This *Total War* experiment, then, is more of a success than *Thrones of Britannia*, and I pray the tactical shake-up won't be forgotten when cavalry inevitably reappears with the next game. But now that I'm done with this review, I'm already planning to head back to *Warhammer II* and *Three Kingdoms* instead of starting another Aegean war. Sorry, *Troy*. ■

PC GAMER VERDICT

Refreshing tactical changes and some of the best maps in the series make this an experiment worth checking out.

75

HARD CASE

MORTAL SHELL is a budget *Souls*-like that punches above its weight. ***By Rick Lane***

It's fitting that *Mortal Shell* is about wearing someone else's skin, given how shamelessly it parades around clad in the epidermis of *Dark Souls*. It's bravery verging on madness to so directly ape one of the most acclaimed games of the last decade, but for a game designed by just 15 people, *Mortal Shell* fares well in From Software's nightmare of a dojo.

Set in the dismal fantasy world of Fallgrim, *Mortal Shell* puts you in the role of a nameless, skeletal creature arisen from an abyssal plain for purposes that are typically opaque. The only clarity you receive is provided by a giant trapped in a tower, who asks you to retrieve three "sacred glands" from various points in the world, which contain a hallowed substance known as Nektar. Give him the glands, and he'll give you power.

Combat is as you'd expect from a game of this ilk, a mixture of light and heavy attacks, blocking, dodging and getting the shit kicked out of you. But there are some differences that, when combined, have a profound impact on the flow of battle. In your natural, skeletal form, you're about as robust as a cardboard box in a storm. Luckily for you, there are corpses scattered about the world, deceased warriors who, once discovered, can be possessed and reanimated.

Not only are these mortal shells tougher than you are, they also have different combat specialisations. One emphasises health, another stamina and evasion, while a third focuses on Resolve, letting you perform special moves and attacks. Alongside their role as classes, shells also act as a second life. Being 'killed' for the first time after respawning will knock your skeletal form out of your shell. Getting back into it will refill your health entirely, but dying a second time inside your shell is final.

Whether you prioritise using one shell or change them as you'd change your underpants, your core abilities always remain the same. Unlike *Dark Souls*, there's no block button in *Mortal Shell*. Instead, you have the ability to 'harden', turning yourself into stone and temporarily deflecting all damage. You can do this at any point during combat, even halfway through a dodge or attack. This can be used to wind up attacks so that they're more likely to land, or to prevent damage from immediate enemy counter-attacks.

> **Your main method of restoring health in a fight is by parrying**

SHELL GAME

Mortal Shell's boldest change to the *Souls* formula is that there's no Estus Flask equivalent. Instead, your main method of restoring health in a fight is by parrying. Using a special talisman, you can deflect enemy attacks and use the resulting opening to drain a chunk from enemy health bars. While initially tougher than *Dark Souls* due to the absence of a main healing item, once you figure out the rhythms of hardening, parrying, and dodging, it's possible not just to survive *Mortal Shell*'s enemies, but to annihilate them. These features bring fantastic dynamism in *Mortal Shell*'s combat, and the result undoubtedly scratches that *Dark Souls* itch.

Everything else about *Mortal Shell* is decent, but could be improved. With locations and environments, most of the budget seems to have been spent on one area, a sprawling obsidian temple that starts out weird and gets increasingly surreal the deeper you explore. Everywhere else is mundane by comparison – forests, ice caves, catacombs. It's all nicely sculpted, but lacking in imagination.

Narratively, *Mortal Shell* is enjoyably enigmatic. I liked how each shell has its own backstory you unlock alongside new abilities, as well as existing relationships with the NPCs you encounter in the world. That said, it's difficult to gauge just how coherent *Mortal Shell*'s fragmented lore is. At a surface level, enemies don't always feel well attuned to their surroundings. And at times *Mortal Shell*'s enemy roster feels like D&D pick-and-mix – cool to fight but not very coherent.

Mortal Shell is no masterpiece, but it's a capable fighter nonetheless. Both its world and story are entertaining to investigate, with glimpses of brilliance hidden amidst its gloomy environments and obscure characters. Ultimately, *Mortal Shell* is not a *Souls* game, but it is the best not-*Souls* game I've played so far. ■

NEED TO KNOW

WHAT IS IT?
Challenging and entertaining budget *Souls*-like

EXPECT TO PAY
£25

DEVELOPER
Cold Symmetry

PUBLISHER
Playstack Ltd

REVIEWED ON
Nvidia GeForce 2080 Super, AMD Ryzen 5 3600, 32 GB Ram,

MULTIPLAYER
No

LINK
mortalshell.com

USE OF WEAPONS

Quickfire guide to Mortal Shell*'s tools*

HALLOWED SWORD
- ⊕ Nice balance between speed and reach. Good special
- ⊖ Low damage output
- ✪ **Special:** Retractable spike in the hilt

HAMMER AND CHISEL
- ⊕ Fast attacks, high chance to stagger and it deals poison damage
- ⊖ Short reach
- ✪ **Special:** Powerful AOE spinning attack

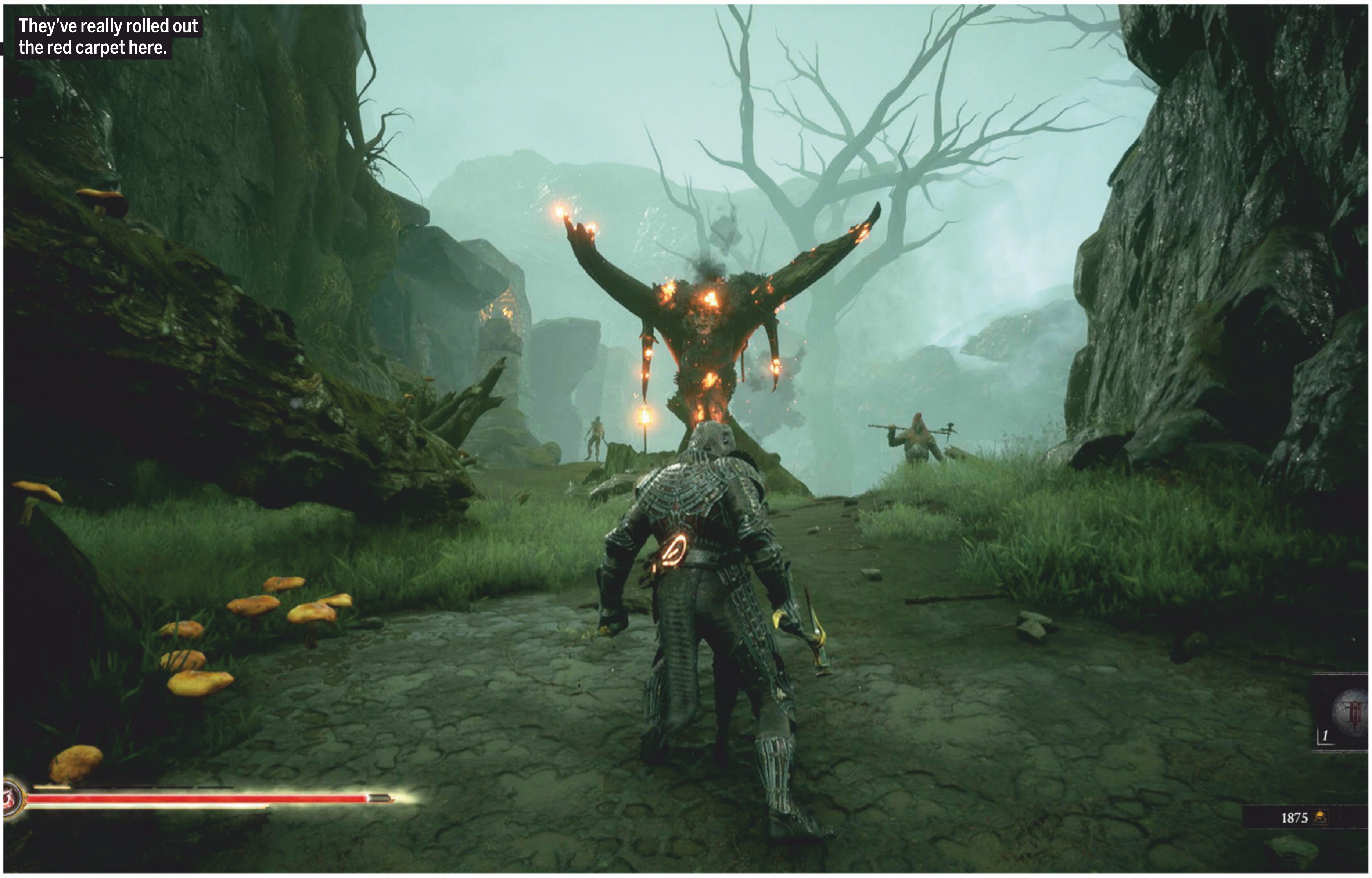
MARTYR'S BLADE
- ⊕ High damage and extremely long reach
- ⊖ Slow attacks
- ✪ **Special:** A frosty aura that adds bonus ice damage

SMOLDERING MACE
- ⊕ Extremely powerful attacks. High chance to stagger and knockdown
- ⊖ Very slow
- ✪ **Special:** Set the mace alight for bonus fire damage

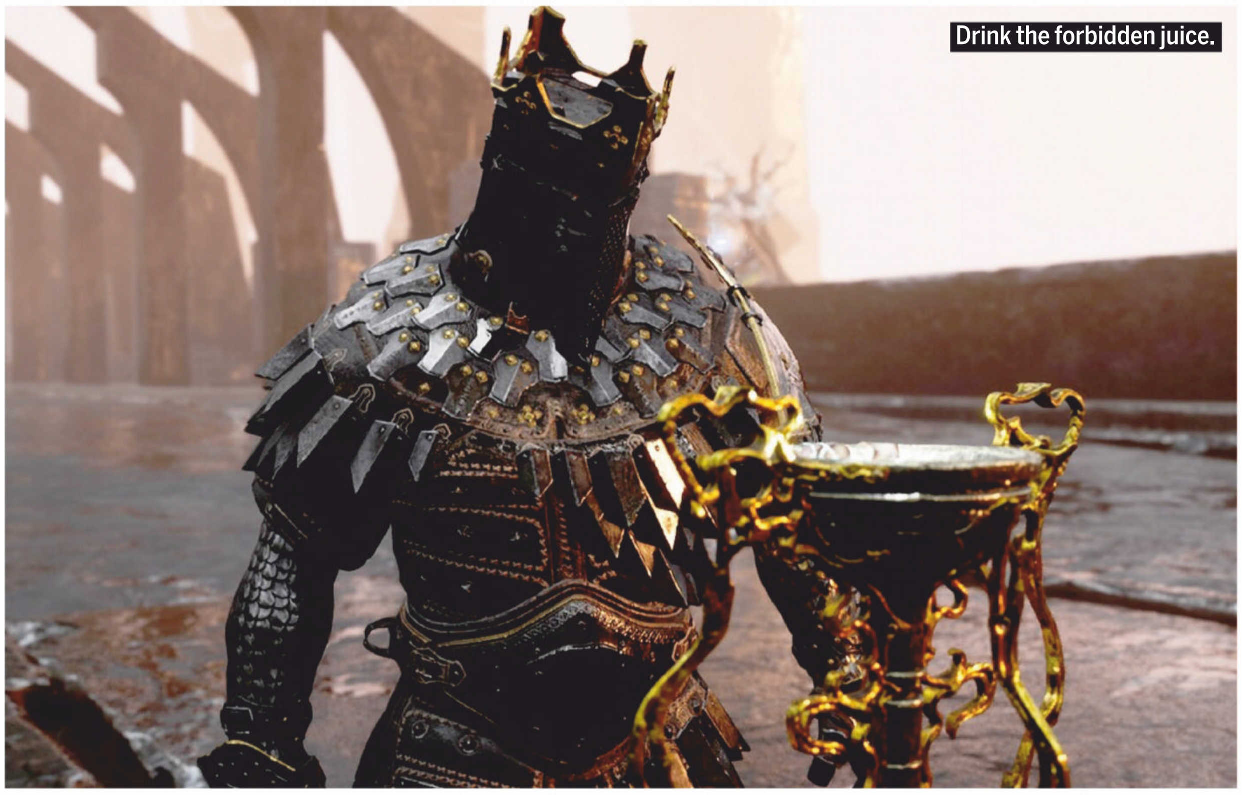
PC GAMER VERDICT

Enjoyably tough and esoteric, if a little uneven, *Mortal Shell* is a strong debut and a worthy *Souls*-like.

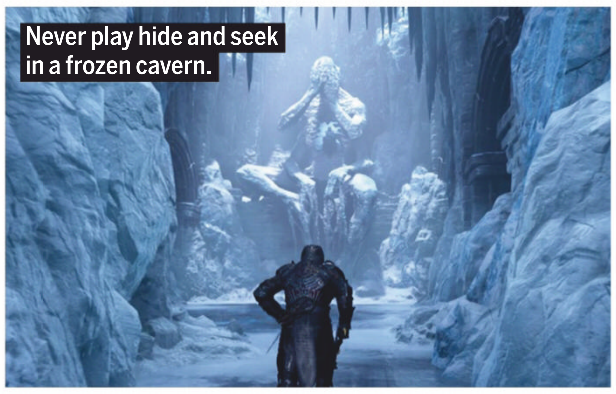
80



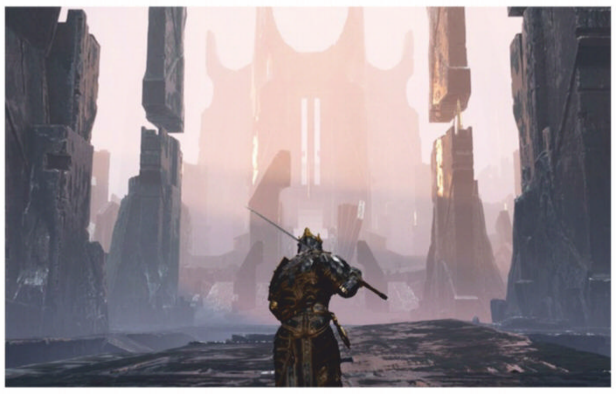
They've really rolled out the red carpet here.



Drink the forbidden juice.



Never play hide and seek in a frozen cavern.



Each weapon has a unique special ability.

Playing the lute by a campfire is welcome respite from battle.

LIFEBOAT

SPIRITFARER is a compassionate adventure that finds comfort in death.

By Rachel Watts

The creative director of *Spiritfarer*, Nicholas Guérin, was at Ubisoft before he joined Thunder Lotus Games. During his time there, he worked on the *Assassin's Creed* series, creating scenarios that would let players stab people in the neck in acts of vengeful fun. Wanting to create something nicer, Guérin joined Thunder Lotus to develop a game that approached the topic of death with compassion. *Spiritfarer*, a life sim about dying, does just that.

You play as Stella, an upbeat ferry master who's responsible for finding and helping wandering spirits pass on into the afterlife. After inviting the spirits to stay on your boat, you take care of them and make sure they live comfortably. Then, when they decide they're ready to move on, you take them to a huge, ominous portal called the Everdoor and see their journey through to the end. Sometimes the goodbyes are easy but, more often than not, they are bittersweet farewells to characters you've grown to love.

You're tasked with crafting a personal space for each resident, preparing their preferred foods, and keeping them happy with plenty of hugs. Very much in keeping with the life sim formula, you'll need to complete little tasks at all the boat's different stations – cooking, crafting, farming, weaving, smelting, etc.

Running around your boat to different stations, especially when you upgrade your boat a couple of sizes, is always a frenzied platforming spree of spinning, jumping, and gliding. Each station has a mini-game to keep things fun, like timing your weaving to make sure the needle lands on the target, or keeping the temperature in between two dials when you're smelting. For a mostly peaceful game, there's always a flurry of activity.

Knowing that the majestic deer Gwen loves a black coffee, I plant the coffee bean seeds, water them until they're ready to harvest, and then take the beans to the kitchen to make one damn fine cup of joe. She's happy, I'm happy, and I think maybe this game won't make me cry after all? I'm very much mistaken.

> **Thunder Lotus always wanted *Spiritfarer* to be a death-positive game**

It's because of these daily tasks that you get to know the characters closely in such a short amount of time, and as thanks for looking after them, the spirits teach you skills that help out with your chores. Through this exchange, you develop a closeness to each individual, and they begin to open up about their past life. When I give the chirpy frog Atul a bowl of popcorn, he's ecstatic at first because he loves any food I give him, but then talks about how he misses the movie nights he used to have with his family when he was alive.

NEED TO KNOW

WHAT IS IT?
A wholesome life-sim where you ferry spirits into the afterlife

EXPECT TO PAY
£24

DEVELOPER
Thunder Lotus

PUBLISHER
In-house

REVIEWED ON
Nvidia GeForce 2080 Super, AMD Ryzen 5 3600, 32 GB Ram

MULTIPLAYER
Yes (two player co-op)

LINK
thunderlotusgames.com

The backstories of your passengers are not the usual fluff you might see in community sims like *Animal Crossing* or *Stardew Valley*. They hit harder because these characters are, well, dead. They reminisce on their old lives, the families they left behind, good times, bad times, and of course, their own deaths. In this way, they are more than just boat passengers – they're friends, guides, and confidants.

GOOD HEAVENS

In *Spiritfarer*, no one truly knows what's on the other side as you enter the elusive doorway. Deciding to go through it is an uneasy choice, but one that *Spiritfarer*'s characters still ultimately make. Thunder Lotus always wanted *Spiritfarer* to be a death-positive game, and this is where that point shines the strongest.

When each character left, I found myself thinking of them. Whenever I made a cup of coffee I thought of Gwen. As I played the guitar to help my crops grow, Summer would pop into my mind. When I gathered berries, I would think about Atul's childlike love of them.

Spiritfarer understands that dying isn't just about someone not being there anymore, it's about the ways you think back on them after they're gone. Thunder Lotus has managed to create a sim that deals with the topics of death and compassion with wonderful balance. ■

FREE HUGS

A selection of Spiritfarer's *best cuddlers*

GWEN
The first character you hug in the game – it's a very special moment.

STANLEY
The little guy practically jumps into your arms and it's adorable.

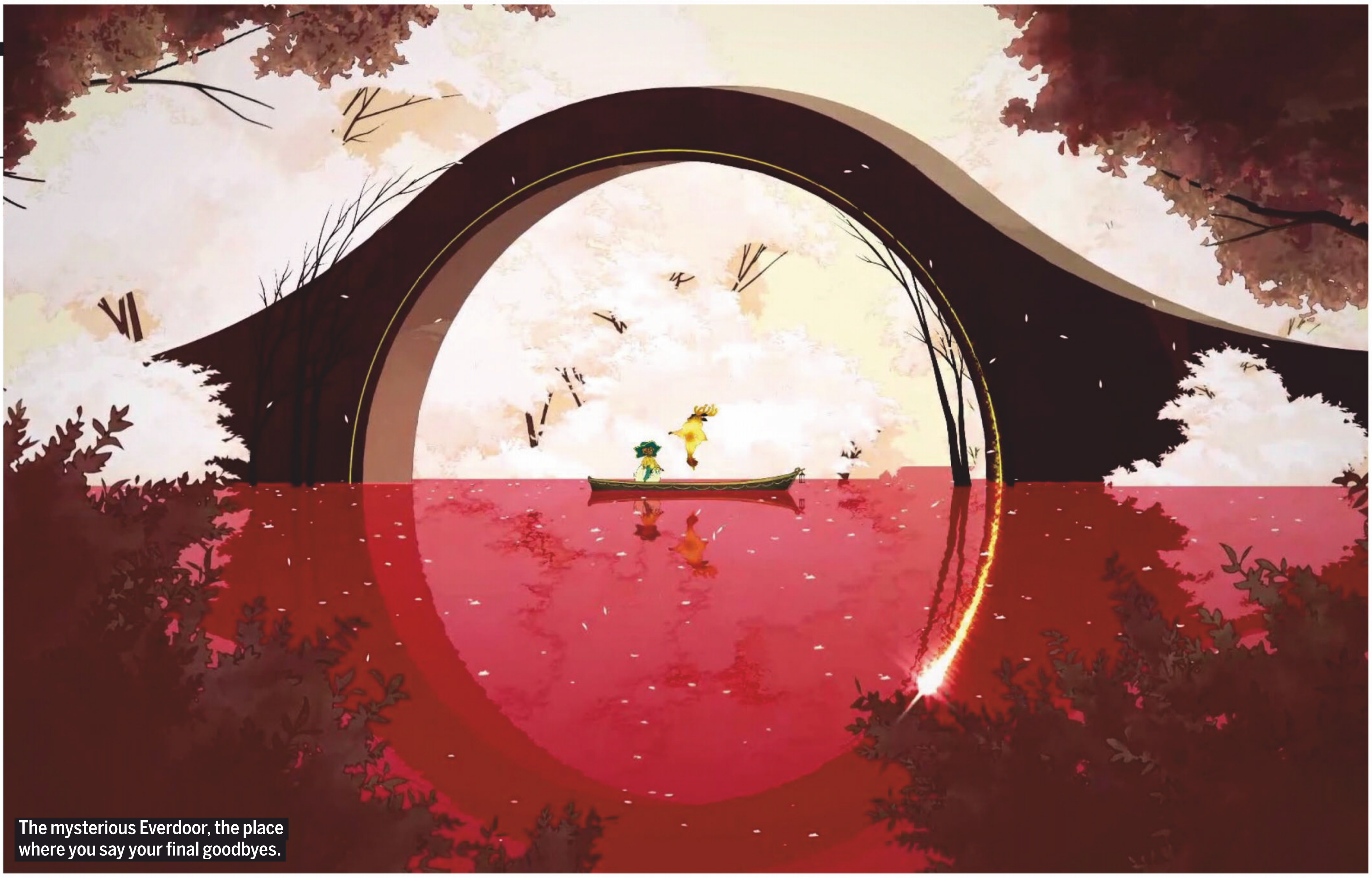
GIOVANI
Hugging a lion with that majestic mane would be totally comfy.

DAFFODIL
Your cat companion with her fluffy tail is perfect for a warm nuzzle.

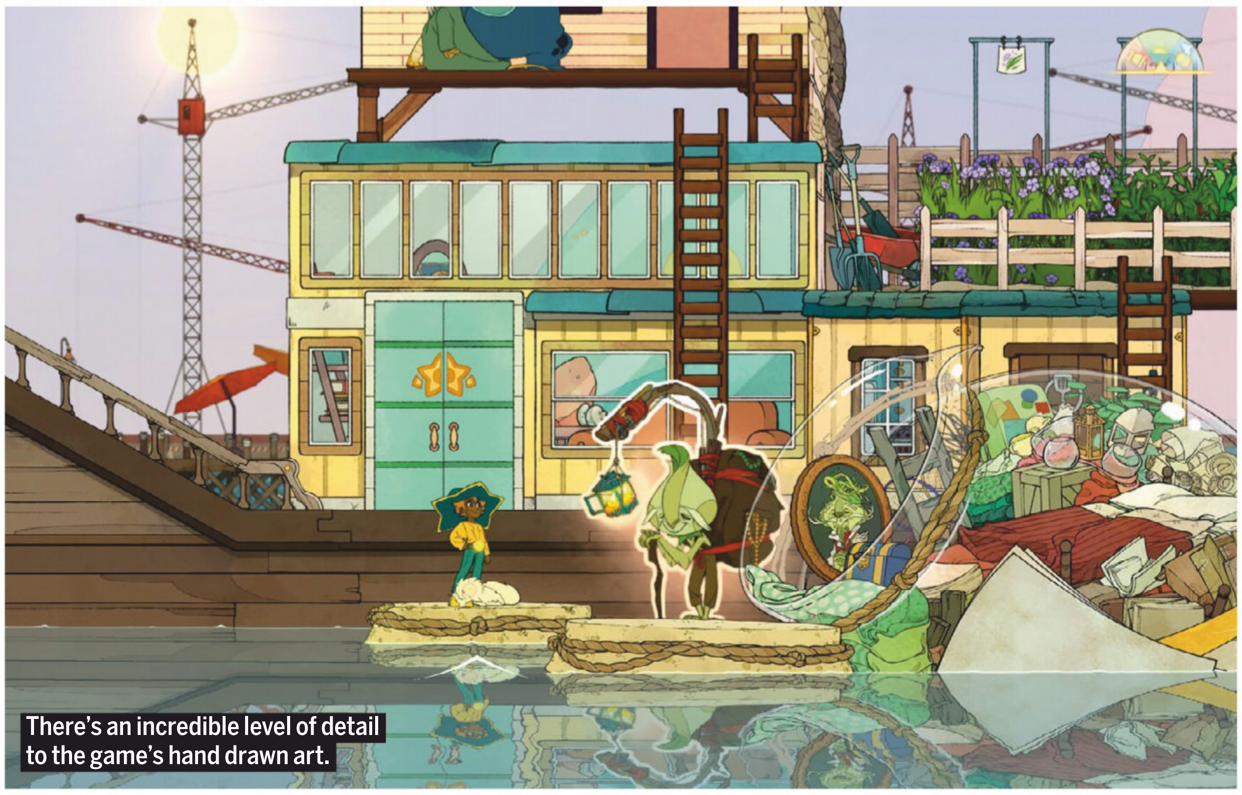
PC GAMER VERDICT

***Spiritfarer* is a thought provoking and bittersweet life sim that understands that death is part of living.**

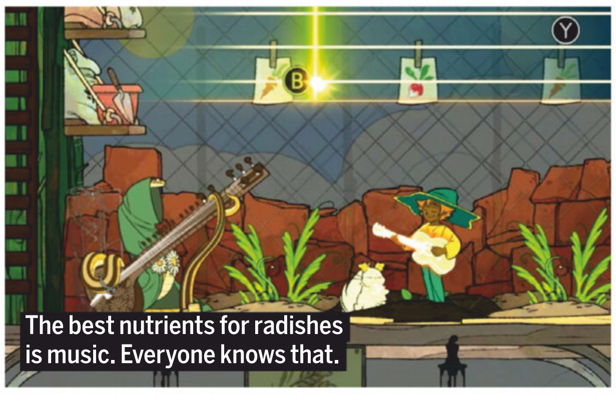
85



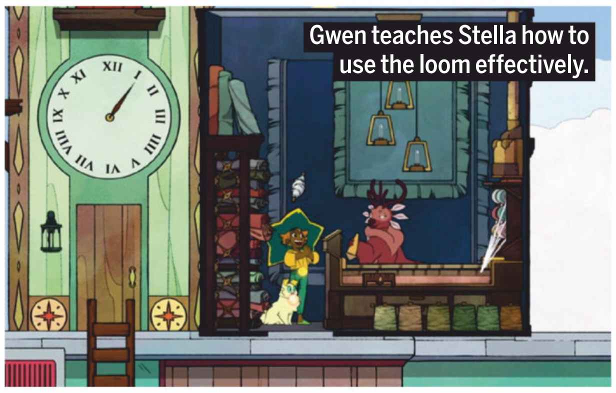
The mysterious Everdoor, the place where you say your final goodbyes.



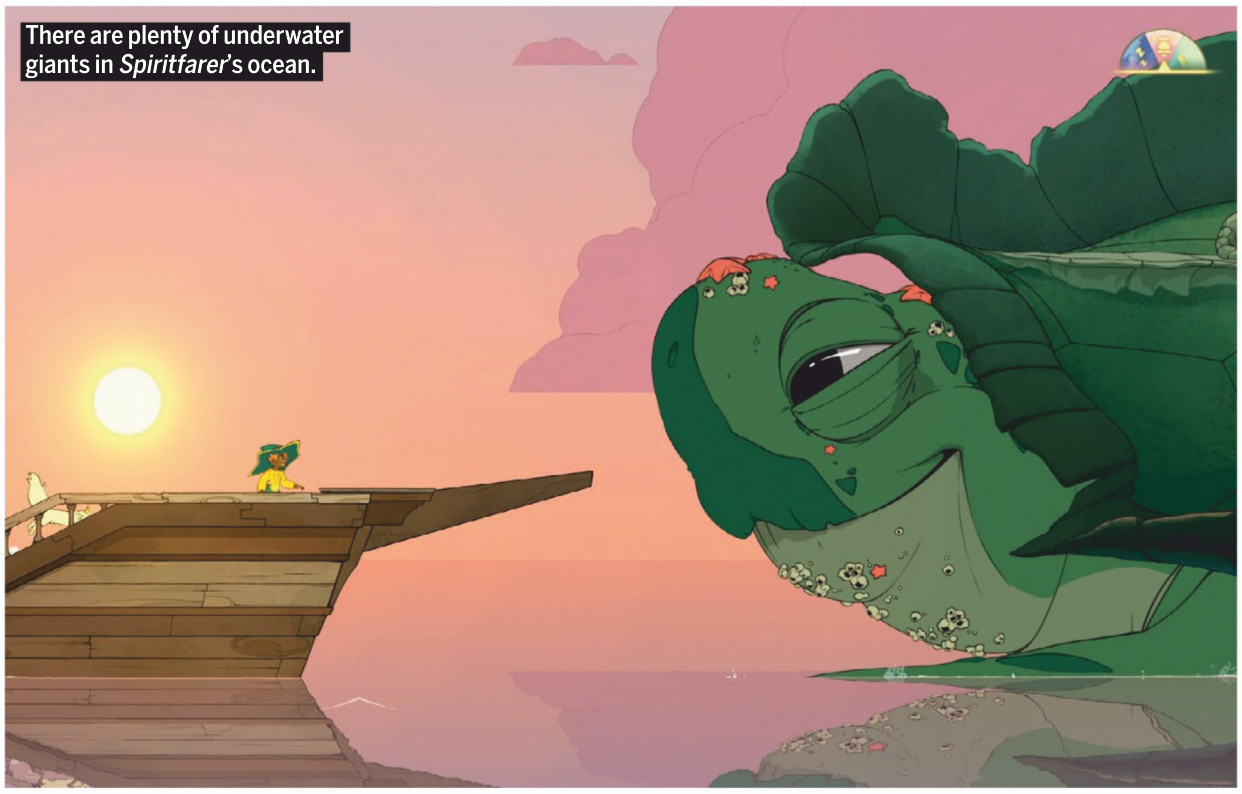
There's an incredible level of detail to the game's hand drawn art.



The best nutrients for radishes is music. Everyone knows that.



Gwen teaches Stella how to use the loom effectively.



There are plenty of underwater giants in *Spiritfarer*'s ocean.

ALL-TIME HIGH

MICROSOFT FLIGHT SIMULATOR takes 'open world' *very* literally.

By Phil Iwaniuk

Do you ever wonder how it'd feel to take a few years away from games, and then peek back through the curtain once you'd become out of touch? Quite often, *Microsoft Flight Simulator* feels like that peek. In its scope and fidelity, it seems to be visiting from the future, when it's commonplace to have access to a photorealistic Planet Earth and the freedom to explore it. When you can hop in a plane and fly over your own town, in the same weather conditions and lighting you can see outside your window. When 'open world' truly means just that.

What a dramatic way for the *Microsoft Flight Simulator* series to reappear after years under Dovetail's DLC-focussed stewardship, and what a towering achievement from Asobo Studio. We'll be talking about the impossible detail of its 1:1 world map for years to come; reading retrospectives about how this piece of software changed environmental design; wandering around other games that harness petabytes of real map data and Cloud AI grunt as a matter of course.

> **What a towering achievement from Asobo Studio**

This is a seismic moment for PC gaming then. But what's abundantly clear is that this is very much the beginning of *Microsoft Flight Simulator*'s journey, one moment on a roadmap that includes regular content updates on a monthly cadence and should by necessity also include just as many to fix some considerable teething technical issues. Release day has arrived, but whether that represents the launch of a finished product or an arbitrary demarcation along its journey to full completion is certainly up for debate.

A total of 20 planes are included with the standard edition at launch, comprising three airliners, two jets and fifteen props. Using any one of those planes, you can position yourself on the runway of any airstrip in the world, take to the skies, and see a startlingly accurate recreation of the region below. It's a terrible moment for anyone who invested in all those scenery addon packs for *FSX*.

It's a premise with an appeal way beyond the flight sim's usual remit. Who wouldn't want to fly around in a playable, 4K, lightmapped version of Bing Maps with volumetric clouds and incredible weather effects? Who could resist the urge to try and find their own house? (I'm still yet to successfully locate mine, but the search continues.) That speaks to a much wider crowd than the previous 30-odd years of the series ever could.

With only a whisper of structure to your experience on the game's part, you're tacitly invited to devise your own adventures. Career progression only exists insofar as completing the flight school and ticking off the landing challenges and bush flights, which for their part offer excellent slices of curated content with leaderboard elements that give you ample reason to come back to them again and again. But you're not going to spend 100 hours on them.

Instead, you're going to plot a dark tourism tour on the world map, ticking off Chernobyl, The Polygon at Semipalatinsk, the Dylatov Pass. You'll tick off every F1 circuit on the race calendar. And you're going to have a fantastic time. The prospect of an entire planet to explore can be crippling too though, of course, so it would be great to see more curated experiences from Asobo in future.

NEED TO KNOW

WHAT IS IT?
A flight sim with all the world to enjoy

EXPECT TO PAY
£60

DEVELOPER
Asobo Studio

PUBLISHER
Xbox Game Studios

REVIEWED ON
i7 9700K, RTX 2080 TI, 16GB RAM

MULTIPLAYER
Yes

LINK
bit.ly/2Qa2oF1

PC GAMER EDITOR'S CHOICE

WORLD TOUR

So it's a simulator for people interested in flight, and a magical virtual tourism portal for people interested at peering into the Mir Mine in a prop they're controlling with a pad. The dividing line, then, is the method of control.

Traditionally, the simulation community reacts like the disgruntled locals in that pub from American Werewolf in London to an influx of casuals – and I say that as someone with half a pretend cockpit sitting on my desk – but there's no trace of sacrificing depth to cater for a broader audience here. The simulation model is more detailed than it's ever been, a statement you can put to the test yourself by switching between 'modern' and 'legacy' models in the game settings. Its realism is scalable, too, to allow

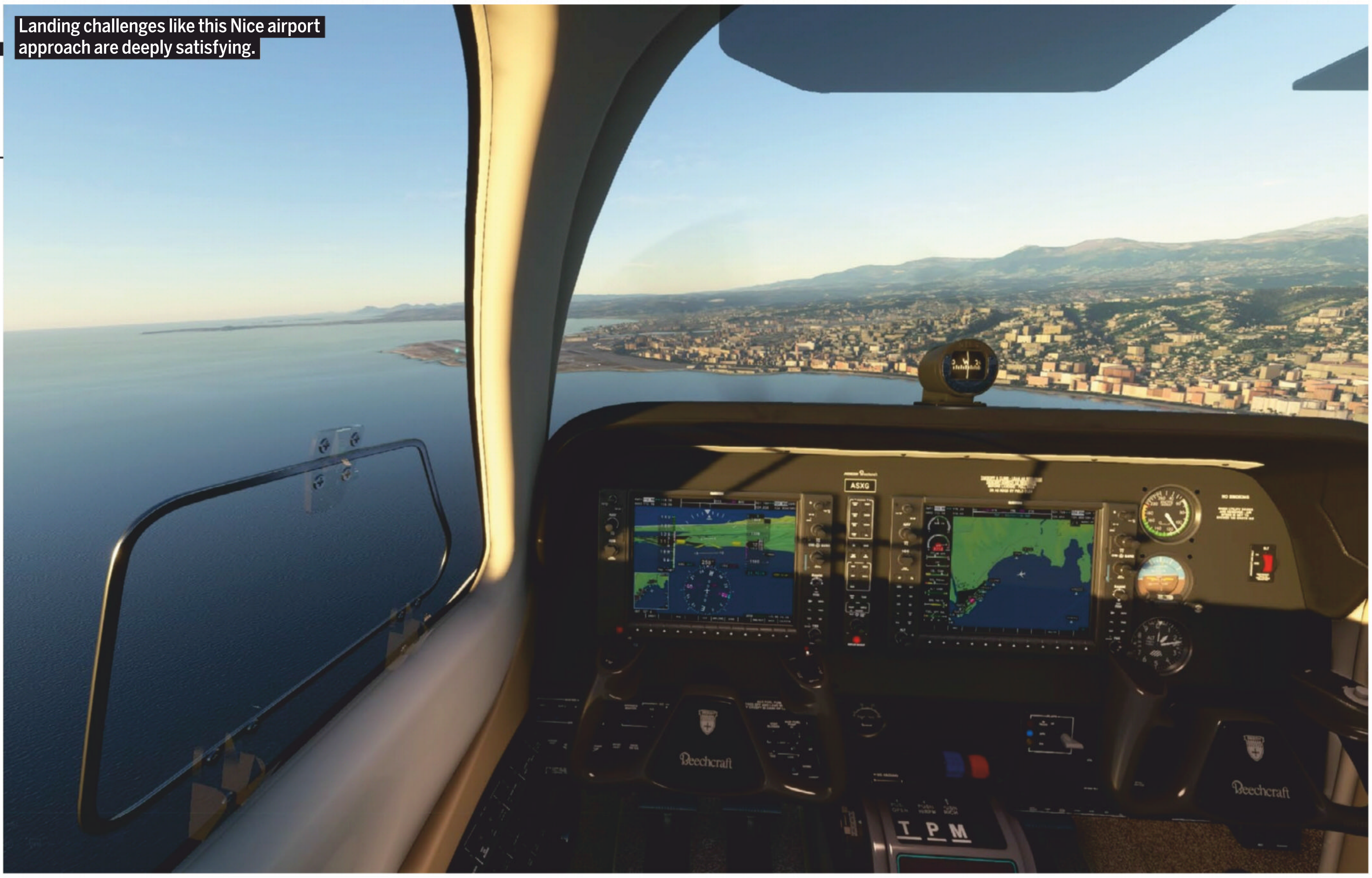
WINGING IT

Microsoft Flight Simulator*'s befuddling airliners*

AIRBUS A320NEO
Max altitude: 39,800 Ft
Cruise speed: 455 KTAS
How does it fly? Who the fuck knows?

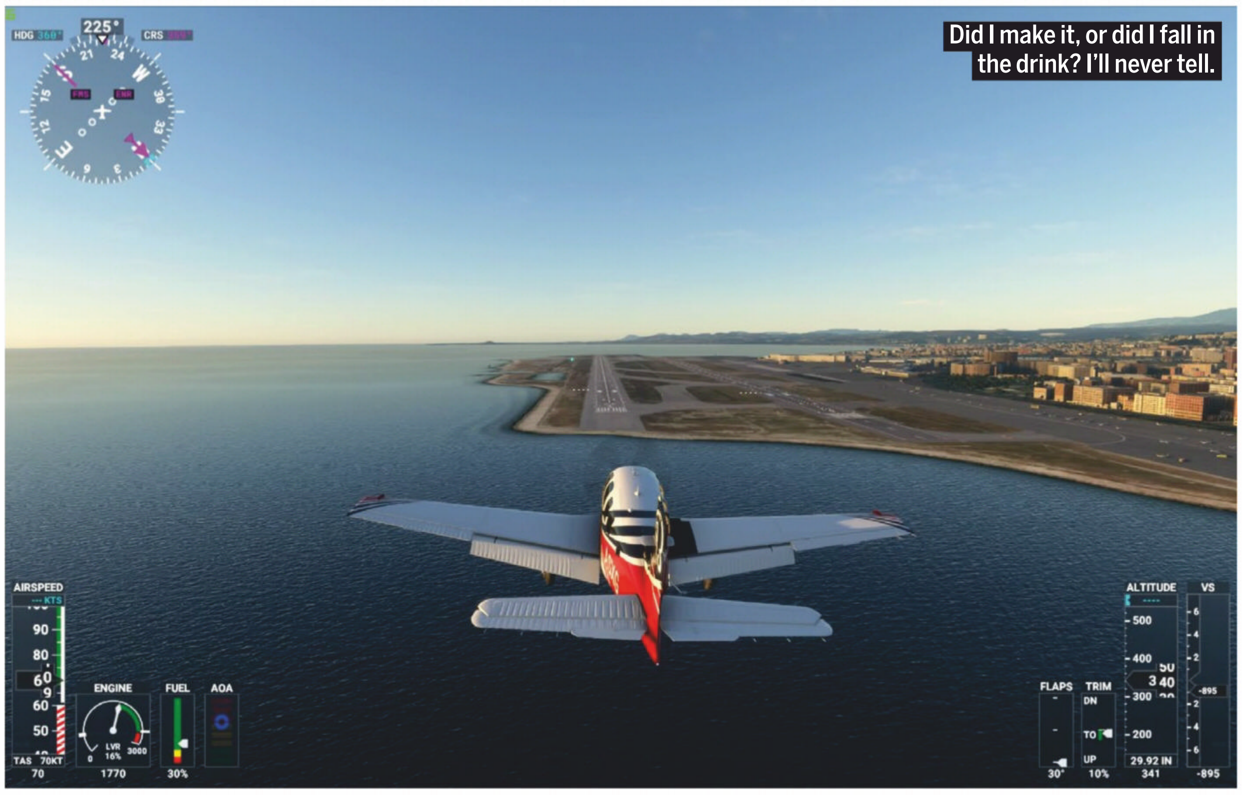
BOEING 747-8 INTERCONTINENTAL
Wingspan: 224.60 Ft
Length: 250.00 Ft
What do all these switches do? Not a clue.

BOEING 787-10 DREAMLINER
Max weight: 557,000 lb
Range: 6,430 NM
What's that beeping? Ohgodohgodohgodoh...



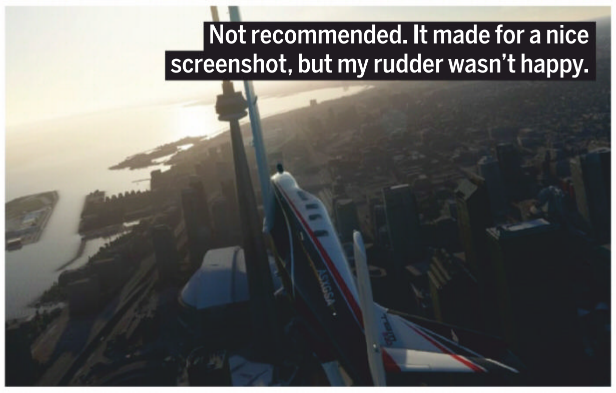
Landing challenges like this Nice airport approach are deeply satisfying.

ASXG
Beechcraft
T P M



Did I make it, or did I fall in the drink? I'll never tell.

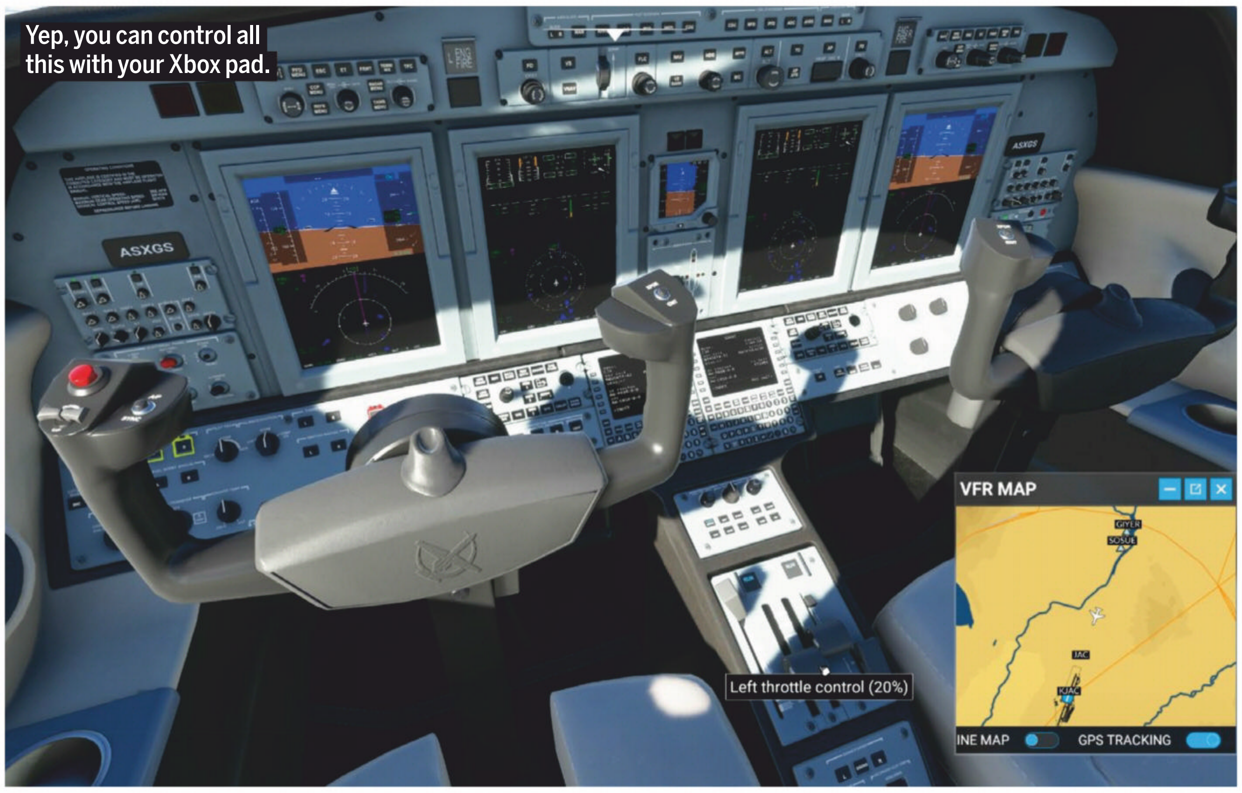
HDG
225°
CRS
AIRSPEED
ENGINE
FUEL
AOA
FLAPS
TRIM
ALTITUDE
VS
29.92 IN



Not recommended. It made for a nice screenshot, but my rudder wasn't happy.

That's right, it's your house. I've been flying over your house and you can't stop me.

Toggle yoke visibility

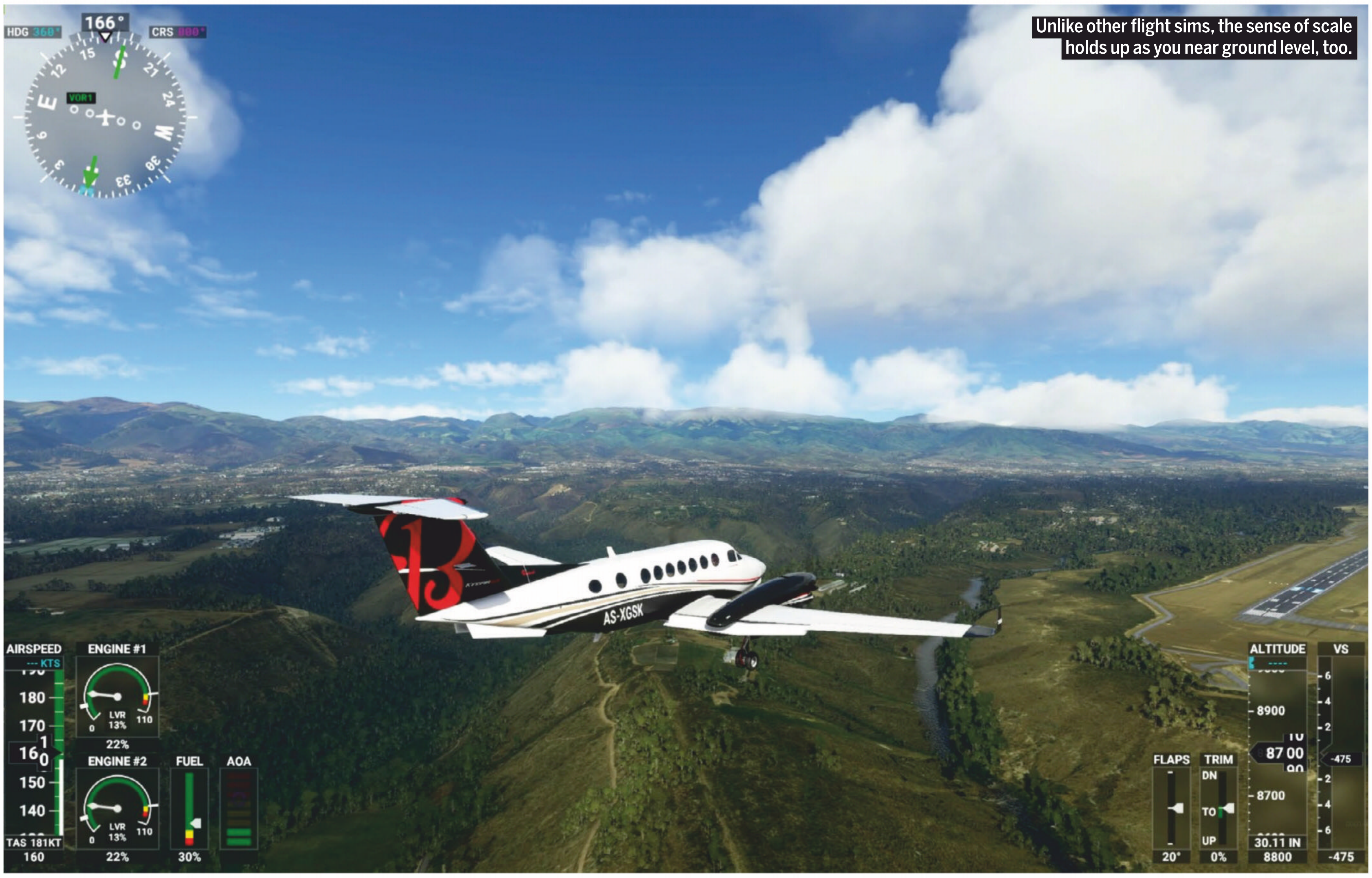


Yep, you can control all this with your Xbox pad.

ASXGS
Left throttle control (20%)
VFR MAP
INE MAP
GPS TRACKING

Stop it, *Microsoft Flight Simulator*. You're almost too much sometimes, you know that?

The game's first live landing challenge, an Alpine approach to a frankly silly runway.



HDG 360°
166°
CRS 000°
VOR1
AS-XGSK
AIRSPEED
--- KTS
180
170
160
150
140
TAS 181KT
160
ENGINE #1
LVR
13%
110
22%
ENGINE #2
LVR
13%
110
22%
FUEL
30%
AOA
ALTITUDE
VS
8900
87 00
8700
30.11 IN
8800
-475
FLAPS
20°
TRIM
DN
TO
UP
0%

Unlike other flight sims, the sense of scale holds up as you near ground level, too.

Would you believe I ended up landing this one just fine? No, and you'd be right not to.

» for zero-stress virtual tourism with an Xbox controller or all-out simulation with a HOTAS setup.

Frankly the Xbox pad pilots are well-served here considering the volume of functions necessary to pilot a plane. Rudder and trim adjustment are over-sensitive by default, but that's an easy fix in the options menus. It seems absurd to be able to marshal such a rigorous physics model through the air using a pad, but it not only works, it actually feels pretty damn great.

Setting up a HOTAS and a few cockpit panels proves more of a challenge, however. By default the game double-mapped certain functions to my Logitech X56, most annoyingly the throttle power. It's an easy enough fix in the menus, but it took me a few attempted takeoffs to figure out which controls were cancelling each other out. With everything calibrated and the plane up in the air though, it's pretty magical using a HOTAS.

Its approach to teaching you how to fly a plane isn't that of a teacher, but a classroom. There's everything in here you could possibly need if you wanted to learn how to set a flight plan with ATC, power up an airliner from scratch, set a VOR vector up to cruise altitude and then an ILS approach in order to land again at your destination. It just doesn't tell you about any of it.

OK, that's actually quite uncharitable. The flight school teaches you the very basics in a hardy little Cessna 152 over eight lessons, from taxiing onto the runway and taking off, to a spot of VOR navigation and landing. But for newcomers there are vast unknown unknowns that you wouldn't think to search YouTube tutorials for because you don't know they exist, or even why you'd need to use them in the first place. ATC is left almost entirely untouched by the tutorial, and navigation isn't explained in enough detail to move straight on from flight school to a custom flight plan without considerable head-scratching and alt-tabbing. For all the game tells you, the pilot who flew your last long-haul flight sat at the yoke for hours on end making tiny adjustments every step of the way. This isn't going to be a problem for long, but it'll be the community's content creators that solve it rather than the game itself.

ABORT. ABORT.

The toughest landing challenges so far

1 LUKLA Why is it so short? And on such a steep incline? Ponder these questions and more as you crash at the foot of Everest.

2 QUEENSTOWN Heavy cloud, driving wind, and a landing strip that gives way to water soon after its end point. Should go well.

3 JFK Boeing 747-8s are heavy. Bringing one to a gentle halt at 17 frames per second is the game's ultimate challenge.

However lost you might feel in the captain's seat, staring at a mass of blinking warning lights, you always want to figure it out. There's such intrinsic satisfaction in piecing together the puzzle of operating an aircraft, and every time you run through a pre-flight checklist you get your head around the cockpit layout that bit more. After a few hours you're raising the crash level and setting the source to BATT without even thinking about it.

BUGS ON THE WINDSHIELD

If the complexity of its simulation presents a bit of a barrier for entry, though, *Microsoft Flight Simulator*'s technical issues lay barbed wire around the door. First to contend with is the installation, which downloads a 500MB client in which the full 90GB install happens. Once it's installed, it takes about three minutes from hitting 'play' to reaching the main menu on an i7 9700K, 16GB RAM and RTX 2080 TI and the game installed to SSD, and the same system can get about 25fps out of big cities and major airports at ultra settings in 1600p.

Technical issues lay barbed wire around the door

In reality that preset's a bit of future-proofing and the visual quality is certainly scalable, but performance doesn't scale proportionally. That means landing at JFK is still a stuttery affair using any preset, including low, which generally produces 30-35fps in cities on my system and a much more consistent 60 out in the wilderness. Crashes are fairly commonplace on my system too – unplugging or connecting a device results in an instant CTD, and scenes causing low frame rates have also seemed to trigger them, albeit less frequently. At the time of writing, several days after release, an Nvidia game-ready driver has improved FPS performance, albeit slightly. Frame rate dips are generally an annoyance, but here they're a real hindrance to your ability to control the plane. Landings require responsiveness and feather-light inputs, and if you're seeing them stutter you're not able to perform them properly.

However frustrating its performance issues are, there's a voice inside your head saying "Can you just give it a minute to render the entire world? Would that be OK?". Still, the fact is low frame rates impact your ability to fly the planes, and on the vast majority of systems, simply whacking the settings down to the low preset won't produce stable 60fps. Seems like the PC gaming community may have found its new *Crysis*.

In the shadow of *Microsoft Flight Simulator*'s achievements, its annoyances, though notable, are forgivable. Poor frame rates aren't reason enough to pass up on the chance to explore the entire planet in a manner games haven't allowed you to before, and slowly mastering its planes is a real payoff. Just don't expect perfection from day one. ■

PC GAMER VERDICT

An incredible exploration portal with even greater potential once its tech issues have been addressed.

89

IMMORTALITY BITES

You could play IMMORTAL REALMS: VAMPIRE WARS forever, but would you want to?

By Tom Hatfield

One of the staples of vampire fiction is that being living forever tends to get pretty dreary after a while. You see the same cycles of life and death, go through the same actions over and over and over, and you just get tired of humanity and their short and petty lives. To its credit the developer behind strategy game *Immortal Realms: Vampire Wars* has created an experience which fully captures that sense of undead ennui. I rather doubt it's an intentional effect, however.

It's a shame really, as the concept is strong. You play as one of three vampire clans representing the classic vampire archetypes (Dracula, Nosferatu, and Sexy Wizard) and compete with other vampires for domination of a sprawling campaign map. At first glance it looks very similar to a *Total War* game. The difference is that the battles here aren't real-time, but turn-based, and that's actually where the trouble starts.

Sadly the battle map is one of the weakest parts of the game. Each fight takes place on a surprisingly small grid, with some light procedural shuffling creating pathways and obstacles throughout. Part of the problem here is that there is nothing stopping the enemy you're fighting from just walking off and attacking whoever they like, which makes the various 'tank' units only really useful when they manage to plug a choke point. Similarly the small size of the arenas makes it hard for fast, flanking units like Dire Bats to get in behind enemy lines safely. *Immortal Realms* feels like it's crying out for some *Into the Breach* style push and slide mechanics, which would liven up its simplistic grid combat enormously.

The campaign map itself has similar problems with repetition. This is especially apparent during the (very long) story missions, which give you objectives like claiming several distant keeps that really push you in the direction of building one big unstoppable army and slowly moving it around claiming every province on the map one by one.

SUCKERS

The sandbox mode tends to be more interesting, as it allows you to choose from several victory conditions, but ultimately if you choose 'gather 1,000 blood points' you're mostly going to be achieving that by conquering villages and using the 'consume' action to invite them to dinner. It's perhaps unfair to criticise *Immortal Realms* for not fixing one of the biggest issues plaguing strategy games of this type, but it really stands out here, partly because provinces only really do anything if you've got an army there to use them. So there's not even a 'managing your home economy' layer to distract you, and you are always 100 percent focused on your army or armies.

> **You are always 100 percent focused on your army or armies**

NEED TO KNOW

WHAT IS IT?
Turn-based strategy game about warring vampires

EXPECT TO PAY
£30

DEVELOPER
Palindrome Interactive

PUBLISHER
Kalypso Media Digital

REVIEWED ON
Intel i5, 16gb RAM, Nvidia GTX 1660

MULTIPLAYER
No

LINK
bit.ly/3l6SFgM

What *Immortal Realms* does have to offer is stuff, and lots of it. The three campaigns are extraordinarily long – every mission feels like a mini-sandbox game in itself – and the three clans of vampires all have very different approaches (Dracul like to rule over human villages while the Nosfernus just eat them, for example). Once you're in-game you'll be managing a tech tree, levelling up vampire lords, and equipping them with items. Most of these bits of customisation are little more than bland stat boosts, but boy there sure are a whole lot of them.

My personal favourite was the spell cards: each lord has a selection, and at each level up they get to upgrade one spell in one of three ways. For example I had a starting card called 'Bloodstorm' which dealt damage to my Lord and every adjacent unit – useful if I can get him into a crowd, but potentially harmful to my own troops. At level up I chose to upgrade it so that it healed friendly units instead of damaging them, leading to some interesting positioning puzzles. More abilities like this could have made the battles much more entertaining.

Immortal Realms is an interesting case study in why having lots of stuff does not necessarily mean having lots of depth, it's quantity over quality. There are any amount of tech trees and level ups and resource cards to dive into, but very few of them feel like they meaningfully shift the way the game plays, and you'll lose interest long before the game does. ■

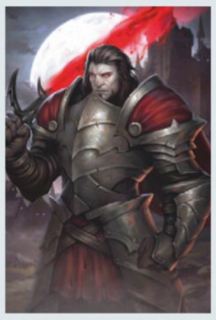
PC GAMER VERDICT

There is so much to do in *Immortal Realms*, but unfortunately none of it turns out to be particularly exciting.

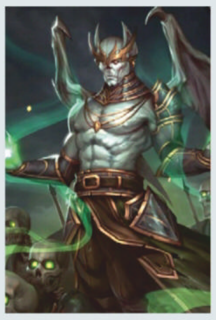
52

WHO FANG CLAN?

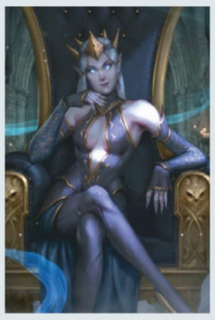
A guide to the vampire factions



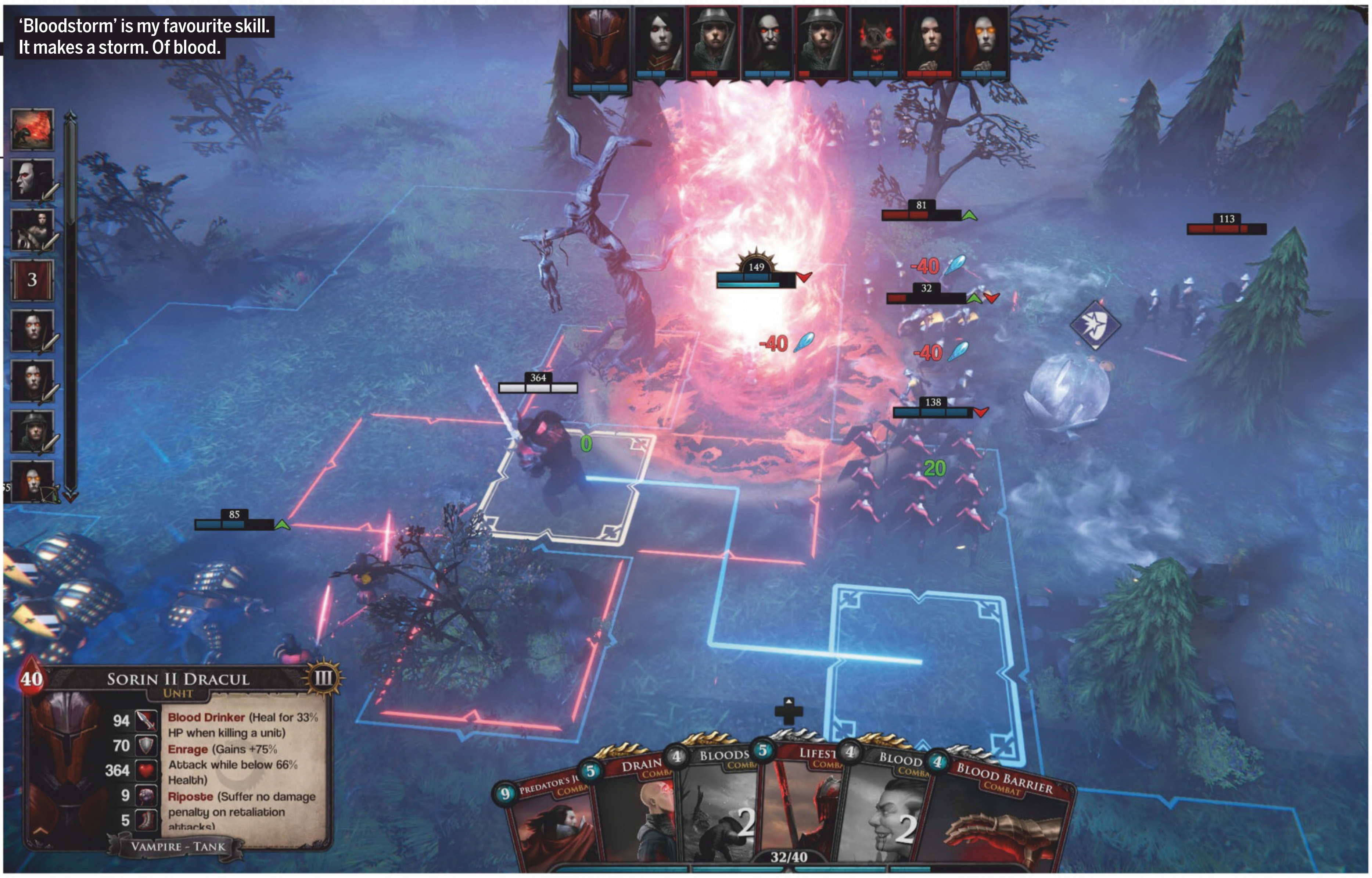
DRACUL
Description: Just add an 'a' to their name
Magic: Blood – steal life and heal yourself
Best unit: Dracul Halfbloods – swordsmen but like, vampires?

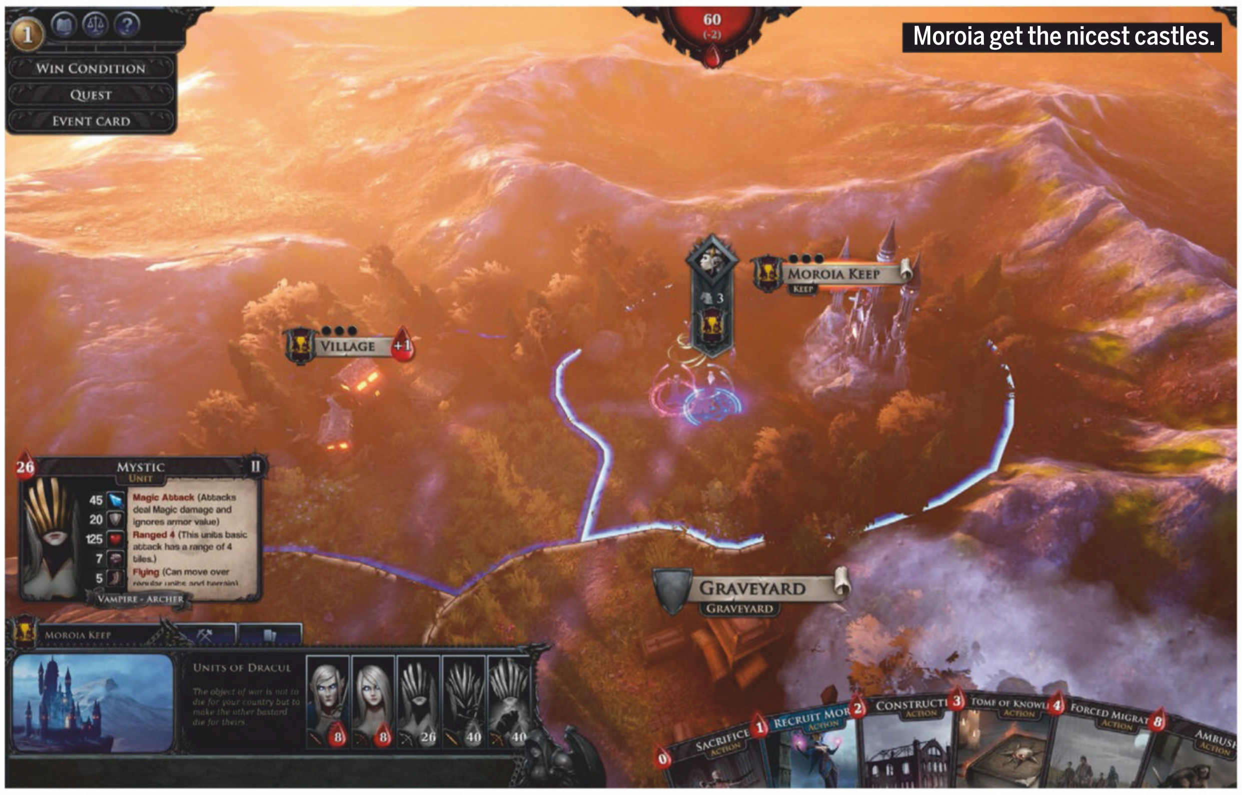


NOSFERATUS
Description: They put the 'dead' in 'undead'
Magic: Undeath – raise the dead, rot the living
Best unit: Upyr Fledgelings – bat-men. No, not like that.



MOROIA
Description: Wizards, but also a bit sexy
Magic: Witchcraft – lets you do wizard stuff
Best unit: Mystics – wizards who do wizard stuff. Also sexy.


'Bloodstorm' is my favourite skill. It makes a storm. Of blood.
Sorin II Dracul
Unit
40
94
70
364
9
5
Blood Drinker (Heal for 33% HP when killing a unit)
Enrage (Gains +75% Attack while below 66% Health)
Riposte (Suffer no damage penalty on retaliation attacks)
Vampire - Tank
Predator's
Drain
Bloods
Lifest
Blood
Blood Barrier
Combat
32/40
-40
-40
-40


Moroia get the nicest castles.
Win Condition
Quest
Event Card
Moroia Keep
Village
Graveyard
Mystic
Unit
Magic Attack
Ranged 4
Flying
Vampire - Archer
Units of Dracul
Sacrifice
Recruit Mor
Construct
Tome of Knowl
Forced Migrat
Ambush

Lords are more powerful than any other unit.

Feed
Village

Legacies
Close

The Nosferatus archer unit is a necromancer who does one massive hadouken.

Always make a smelly fog.
100
140
156
85

BOBBLE ROYALE

FALL GUYS: ULTIMATE KNOCKOUT is a cute yet still tense party royale. *By Chris Livingston*

I'm dressed as half-astronaut, half-ballerina when someone else dressed as a full hotdog grabs the tail pinned to my butt and runs off with it. I swear, chase them and make a last ditch dive to reclaim the tail as the clock expires. I miss and swear again. That hot dog just cost me the crown. *Fall Guys: Ultimate Knockout* may be adorable and silly but that doesn't mean it's low-stakes. Despite the party game vibe, it's still a battle royale.

Each round of *Fall Guys* begins with 60 players rushing through an obstacle course in a chaotic mob of jumping, diving, whooping, and ragdolling bodies. Only the first 30 or so across the finish line qualify for the next round, which is randomly chosen from about two dozen different levels. Each level eliminates more players until the final round, where anywhere from a handful to more than a dozen compete to be the sole winner.

For most of a match I'm content to goof around, take reckless chances and stop to celebrate with emotes before crossing the finish line. Getting ragdolled out of contention usually just makes me laugh. But as the end of the final round approaches I'm suddenly taking things seriously as hell. I may be a bean wearing a frilly pink tutu, but I want to win.

There are a few different types of levels. Races are the most common, and sometimes you'll engage in several footraces through various obstacle courses in the same match. The courses may have giant spinning fan blades to knock players back, ramps coated in slippery slime, spinning balance beams, or vanishing floor tiles, walls that can be broken through, or giant pieces of fruit tumbling down the course, knocking players aside like bowling pins unless you dart and dodge around them.

> **I may be a bean wearing a frilly pink tutu, but I want to win**

HEAD OVER HEELS

More exciting are the levels that act as an endurance competition, like Block Party, where everyone stands on a platform together as a series of walls sweep across it, forcing players to jostle and shove their way through small gaps to avoid being knocked off. Making a dive through the gap at the last second is exciting, and getting bottlenecked in a kludge of wriggling, hooting competitors is hilarious.

Other levels divide players into groups to achieve a goal, and these team games are among the best in *Fall Guys* because they provide opportunities to sabotage the other team. Most events in *Fall Guys* have you running alongside other players, but in team modes there's a real benefit to messing with them and disrupting their progress.

NEED TO KNOW

WHAT IS IT?
A cute and frantic 60-player battle royale game show

EXPECT TO PAY
£16

DEVELOPER
Mediatonic

PUBLISHER
Devolver Digital

REVIEWED ON
RTX 2080, Intel i7-9700K, 16GB RAM

MULTIPLAYER
Only

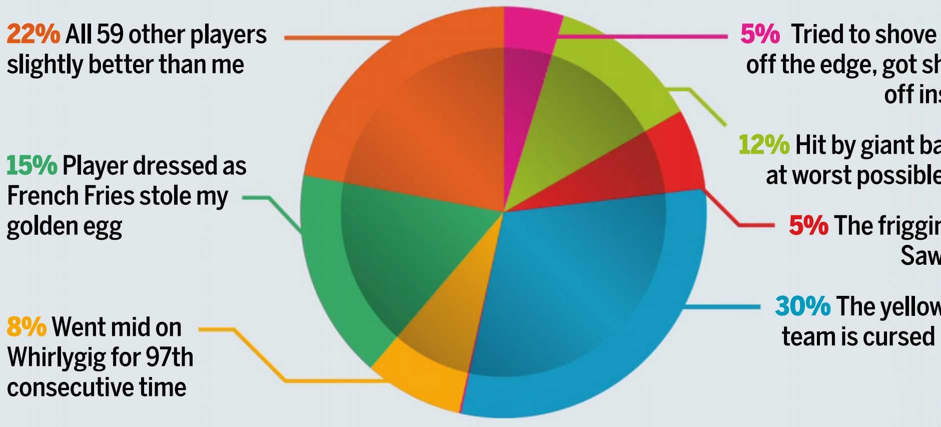
LINK
fallguys.com

In Egg Scramble, teams fight over a pile of eggs in the centre of the map, grabbing as many as they can and depositing them in their team's basket – and then trying to pilfer a few more from the other teams' baskets before time runs out. In Rock 'N' Roll teams push a giant ball down an obstacle course to the finish line, and you can run ahead to block your opponent's balls, making for a frantic shoving and grabbing match. The downside is that in team games, if you don't have friends with you in the match, you're solely relying on a group of strangers you can't communicate with. You can be having a great run but lose because the rest of your randomly selected teammates can't get it together.

But randomness works for *Fall Guys*. It's so silly and breezy that if I'm eliminated because of shabby teammates, or if I get bonked into a pit because someone else blundered into a spinning fan and flew into me, I just laugh and shrug and queue up for another match. It's only in the final round where I care enough to swear. Damn that hot dog to hell.

Fall Guys is best enjoyed in small doses, and an hour of play a day is plenty. But that hour is usually great fun mixed with some delicious tension in the finals. It's an impressive feat to make a game so charmingly silly that's still filled with genuinely dramatic moments, heartbreaking losses and last-second acrobatic feats. ■

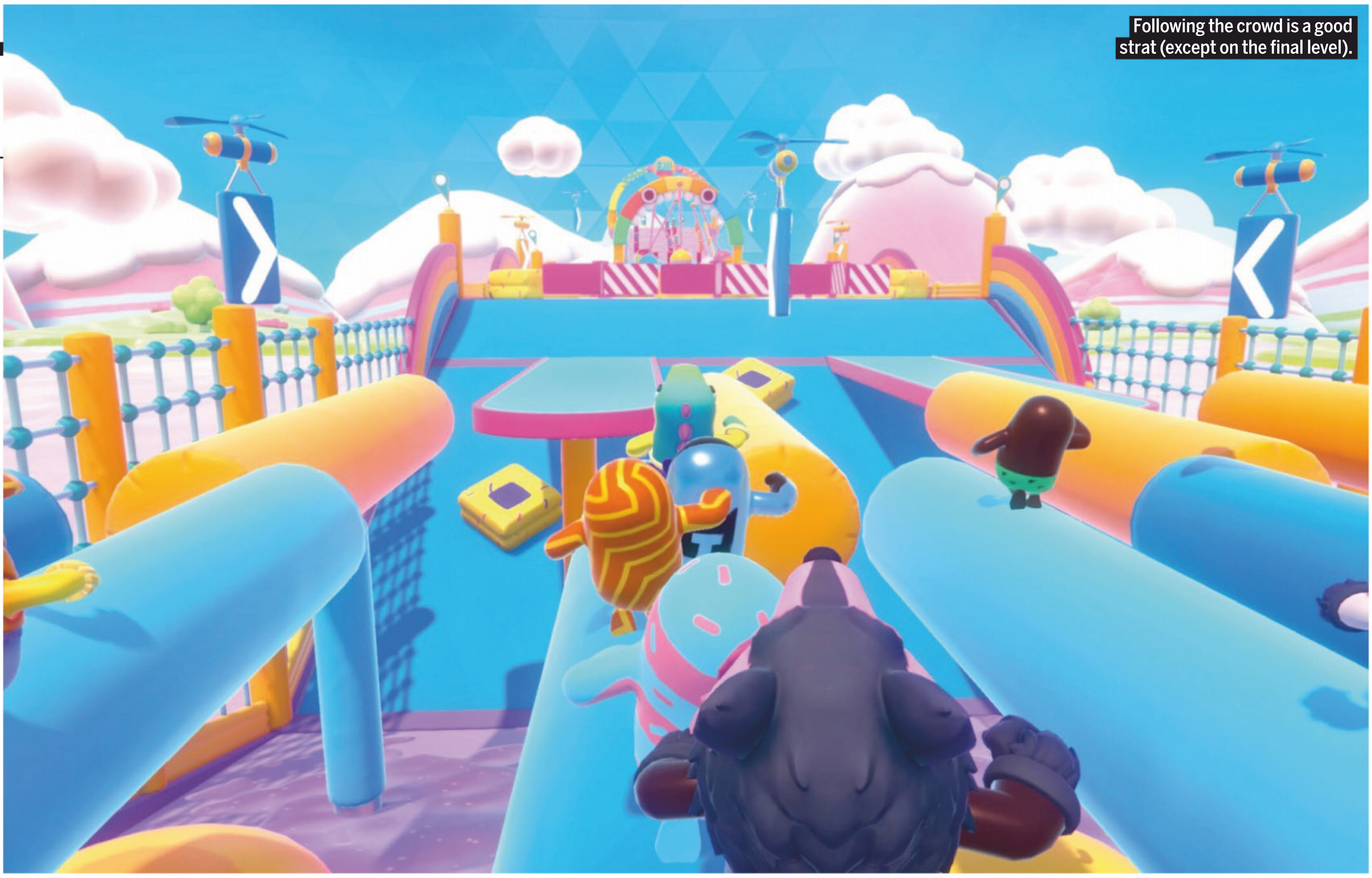
FAIL GUY *Common reasons I lost that* Fall Guys *Match*



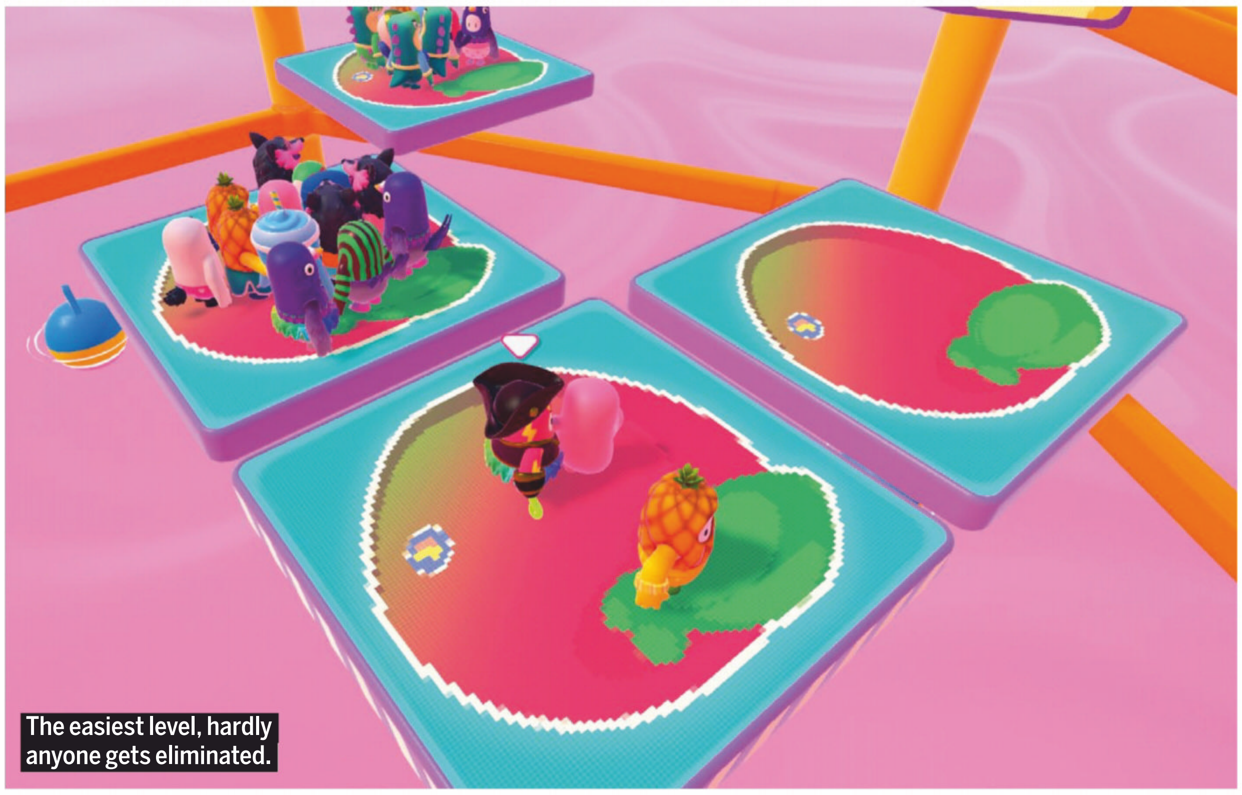
PC GAMER VERDICT

In a genre that is overstuffed with guns and grenades, this cute and cuddly battle royale stands out.

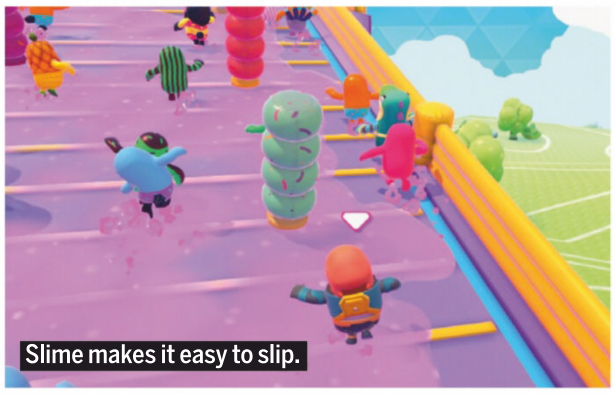
80



Following the crowd is a good strat (except on the final level).

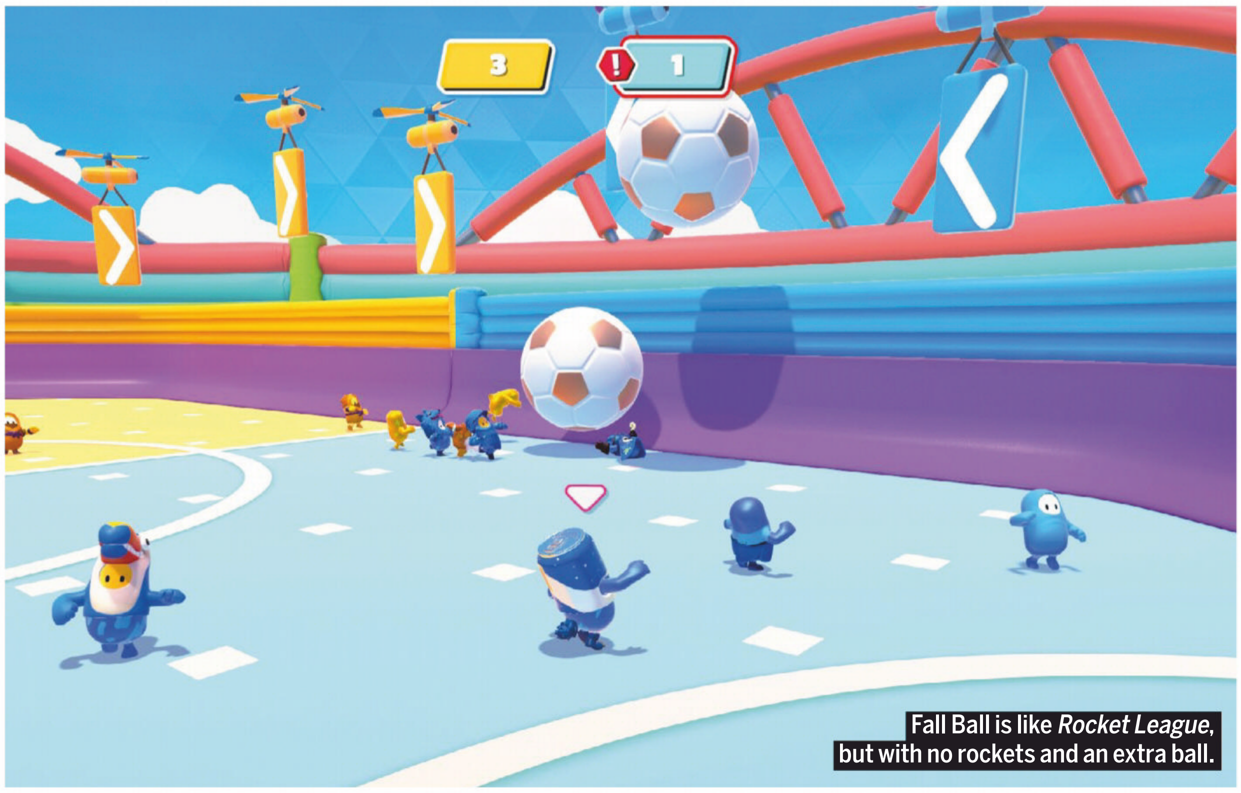


The easiest level, hardly anyone gets eliminated.

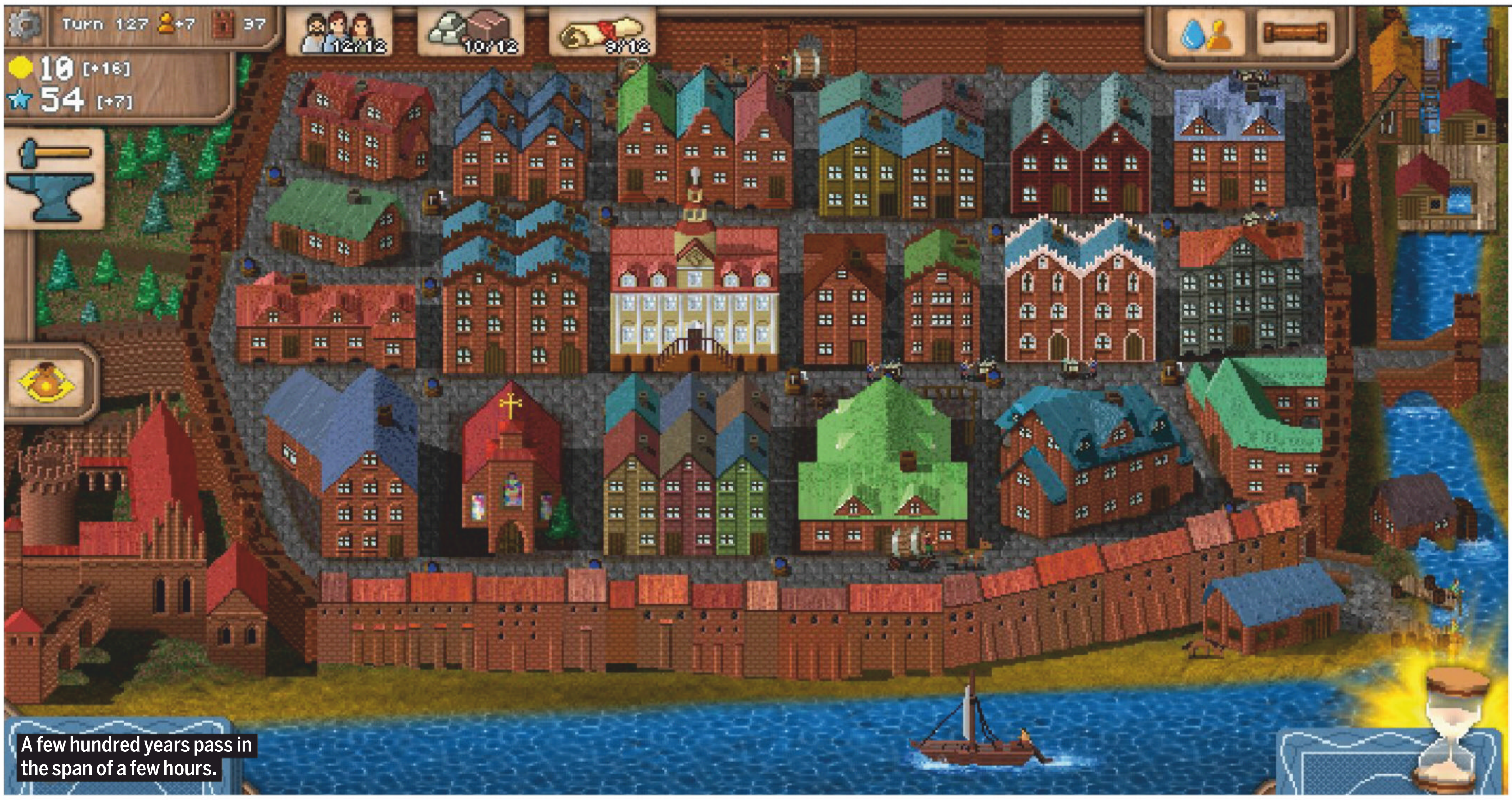


Slime makes it easy to slip.

Out of 60, only one can wear the crown.



Fall Ball is like *Rocket League*, but with no rockets and an extra ball.



A few hundred years pass in the span of a few hours.

PIPE DREAM

Bringing water to a medieval town in management game **WATERWORKS!**

Part citybuilder, part card game, part turn-based management sim, *Waterworks!* is an inventive browser game that tells the history of a settlement – or the liquid part of it at least. The medieval town of Grudziadz is struggling to provide clean drinking water to its residents, and you've been brought in to help, first with literal buckets of river water and later with more sophisticated infrastructure including wells and pipes.

With the town's houses fixed in place, you're left to sort out the routes of water carriers, to build off-screen structures and lay pipes at strategic points, and each action costs you valuable cash and resource cards. You can only achieve so much before you run out of resources, though each new turn doles out more money and refills your hand.

Typical cards include foremen, builders and scribes, carriers, wagons and sumps, and various gifts to or from the local ruler, which will give you cash, or Influence, at the expense of the other. Influence is essentially your health: a tracker tied to Grudziadz's residents that will increase when they're well-hydrated, and decrease if they're parched, after every turn. Playing on Normal difficulty, my Influence level was untroubled for the longest time, but the town's water demands did get more pressing eventually.

As the town progresses from a pile of wooden shacks to a collection of grand, tall stone buildings, so too the method of water delivery must improve. You'll still dispatch meagre water carriers, but now you'll send wagons out to join them, and construct upgrades to swap the buckets for carts, for example. During an average turn, you're busy paying workers to build things, you're meeting (or ignoring) the occasional demands of the ruling elite, and you're also tinkering with water routes to match the growing population. You're always working towards something, whether it's a simple storehouse upgrade or some epochal new technology, and I do love how progress is reflected visually in the town, with houses getting bigger and the town gradually being enveloped in a great stone wall.

BUCKETS OF FUN

The pixel art is vivid and expressive. Half of the joy is in watching the world, as carriers slosh buckets from house to house and horses canter about the streets. You're watching history take shape before your eyes.

It's that sense of wonder that kept me playing to the end, even as the job became slightly repetitive. Later tech doesn't change the town much, it just brings you closer to the win condition. You're constructing something just to unlock something else. Despite being a relatively short game, it is a little bloated.

Waterworks! is simplistic and fairly linear, but it commits to its theme of water distribution in Poland. It's not dry, despite that. Quite the opposite, it's full of life: a tableau of the medieval world. ■

> **You can only achieve so much before you run out of resources**

NEED TO KNOW

WHAT IS IT?
Medieval strategy where you manage the water needs of a town

EXPECT TO PAY
Free

DEVELOPER
scriptwelder

PUBLISHER
In-house

REVIEWED ON
AMD A4-6300@3.7GHz, 6GB RAM, GeForce GT 610

MULTIPLAYER
No

LINK
bit.ly/WaterGame

PC GAMER VERDICT

History comes to life in this satisfying management game that wrings plenty of ideas from its water theme.

83

ON LIKE TRON

SOLAR GLADIATORS scratches that arcade itch

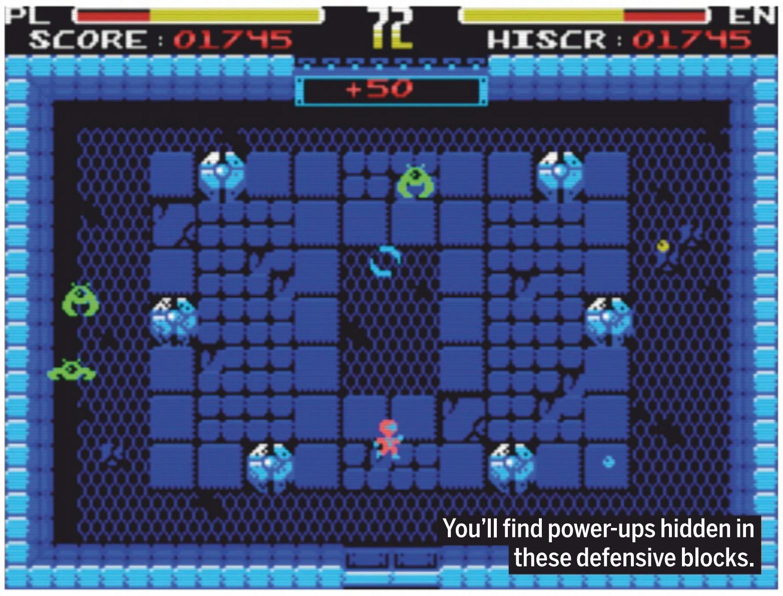
Indie games have changed massively in the last decade or so, but through it all developer *Locomalito* has been quietly plugging away, making arcade-style games reminiscent of classics from the '80s and '90s. Shoot-'em-ups rub shoulders with platformers and action games, and each is convincingly old-fashioned and polished to a sheen.

Locomalito's latest freeware gem is arena shooter *Solar Gladiators*, which pits your discus-flinging hero against a procession of monstrous bosses, with just one life and a persistent health bar to fret about. It's a little bit Tron, in that your sole weapon is essentially a high-tech boomerang, and a wee bit *Smash TV*, but without its famous twin-stick control scheme.

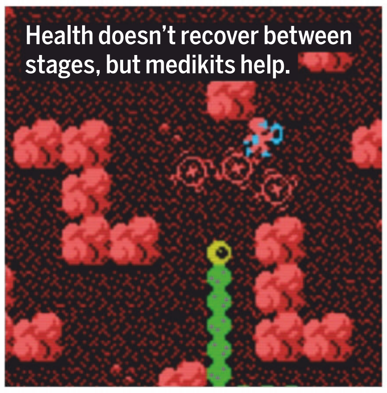
Solar Gladiators is comfortably its own thing, however. You're not fighting waves of baddies but taking part in a series of duels. Every level brings a new boss fight, with a fresh pattern to learn as you contend with the unique nature of each enemy. There's the big snake that zags around like its Nokia namesake, the immobile plant that endlessly regrows a defensive barrier, and the slime that insists on multiplying as you shoot it to bits. There are 15 boss fights, which you'll tackle one after the other, and a lot of effort has been put into making them feel unique.

I don't normally care about high scores, but they feel like a badge of achievement here, as I did a little better each time I attempted the boss gauntlet. Like Locomalito's other games, this looks and feels retro, while being subtly informed by modern sensibilities. It's tough but not overly cruel, and lengthier and more varied than arcade games often were back in the day. ■

79



You'll find power-ups hidden in these defensive blocks.



Health doesn't recover between stages, but medikits help.

NEED TO KNOW

EXPECT TO PAY	DEVELOPER	LINK
Free	Locomalito	locomalito.com

IT'S ALL RELATIVE

Piecing together music history in FAMILY

The music might last forever, but everything around it fades. Bands split up or lose their edge, venues shut their doors, and tastes change as music scenes eventually vanish. In unusual detective game *Family*, you're trying to piece together a history, putting names to each of the players in the London pop scene of a couple of decades ago.

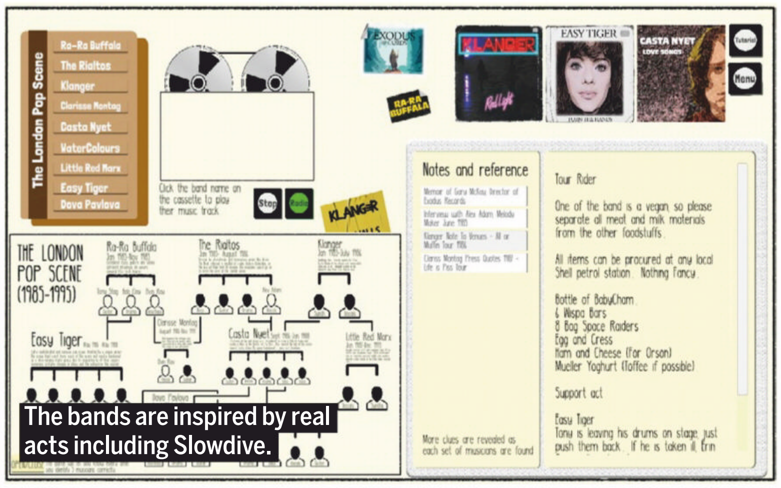
It's the detective's 'serial killer' wall, but with a family tree of indie bands. Who played drums in The Rialtos? Who played guitar in Easy Tiger? Clues lie in snatches of a radio broadcast, in songs from the (fictional) bands, and in snippets of articles delivered piecemeal to your desktop, every time you guess any five musicians correctly.

As a detective game, *Family* makes you work for it. I resorted to a bit of guesswork at the end, but I was able to figure out most of the identities by really scrutinising all of the evidence. It trusts the player to play detective, as they exhume a forgotten scene from music history.

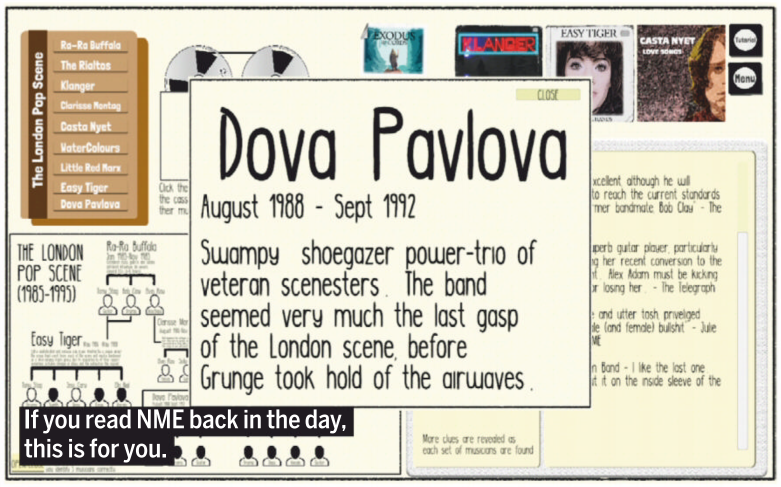
More impressive, however, is the music itself. Developer Tim Sheinman has created a track for each of the nine bands from the '80s-'90s indie scene: that's nine songs that sound distinct from one another, and that feel pretty convincing for the era. You'll get to know these musicians as you follow them from band to band, as you read articles about them and listen to the reminiscences of one of the major players. It seems almost inconceivable that none of these bands actually existed.

The march of time can be depressing, but *Family* finds joy in discovery, and meaning in its ritual of remembrance. ■

82



The bands are inspired by real acts including Slowdive.



Dova Pavlova

August 1988 - Sept 1992

Swampy shoegazer power-trio of veteran scenesters. The band seemed very much the last gasp of the London scene, before Grunge took hold of the airwaves.

If you read NME back in the day, this is for you.

NEED TO KNOW

EXPECT TO PAY	DEVELOPER	LINK
Free	Tim Sheinman	owl-skip.itch.io/family

OLD GAMES REVISITED by Matthew Elliott

The PC Gamer editors when your freelance is late.

TOKYO STORY

Salt, sidequests, and suplexes in the impeccable YAKUZA 0

Plenty has happened to the *Yakuza* series since this prequel arrived on PC. There's been a new game engine, which refined the experience but diminished the crunchy combat of previous titles. We've had spin-offs and remasters. And, somewhat bizarrely, a new, turn-based sequel is coming straight to Steam when it's released in the West. After years of begging for the series to come to PC, we suddenly have more choice than the bento selection at Poppo.

But not only is *Yakuza 0* still the ideal start for new players, it's also the best place to return after a foray into the new engine. The combat system is crisp and compartmentalised, full of context sensitive specials and fighting styles that feel different and necessary. Kamurocho and Sotenbori are as dense and detailed as they ever have been. So rather than feeling like you're stepping back into an old system, *Yakuza 0* resembles your favourite band at their technical peak, before they went off and did that experimental bouzouki folk metal album. There are still moments when you can see the age of some of the assets, in the stock animations and occasionally doughy faces, but there's a degree of easy detail in *Yakuza 0* that we'll hopefully see again in future games.

> **It's potentially the most accessible tale in the *Yakuza* canon**

And it's those details that make the difference. The *Yakuza* games have never had huge, open locations. Even in *Yakuza 5*, the most decadent and generous game in the series, it's a collection of small, discrete districts rather than a single intimidating sprawl. So the richness of the world comes from little things, such as tantalisingly detailed menu descriptions and bartenders who provide a short history of Suntory with every glass of Yamazaki whisky. It's these things that still make *Yakuza 0* feel so special, and the sort of game where you're happy to do the same thing over and over for hundreds of hours. Stopping for a bowl of ramen still provides a rush of endorphins for any escapist Japanaphile. And fights rarely become tedious: instead, it's an opportunity to show off your favourite Heat Actions again, whether it's booting people off bridges or salting eyeballs.

NEED TO KNOW

WHAT IS IT?
Pummeling open world prequel set before Japan's economic bubble burst

EXPECT TO PAY
£15

DEVELOPER
SEGA

PUBLISHER
In-house

REVIEWED ON
Intel Core i7-7700 CUP @ 3.60GHz, 16 GB RAM, NVIDIA GeForce GTX 1070, Windows 10

MULTIPLAYER
No

LINK
yakuza.sega.com

All this probably wouldn't matter if the story was dull, but it's potentially the most accessible tale in the *Yakuza* cannon. Kiryu's prehistory provides spoiler-free context, making everything that follows in the first Yakuza game more effective. And Majima's experience in Osaka is properly captivating, blending absurd cabaret club minigames with a heartfelt, personal story that defines who he becomes. That's a lofty way of talking about a game featuring an NPC called 'Walking Erection', but that's what Yakuza is: soaring moments of characterisation one moment; crossword puzzle marriage proposal the next. And something about the inhabitants of *Yakuza 0* feels like this balance is perfectly struck.

Yearly releases mean we might never see its like again, but returning to *Yakuza 0* feels like a celebration. ■

PC GAMER VERDICT

The fourth and fifth games remain the best examples of what the series can do, but this is a great place to start.

91

CARDIAC RHYTHMIA

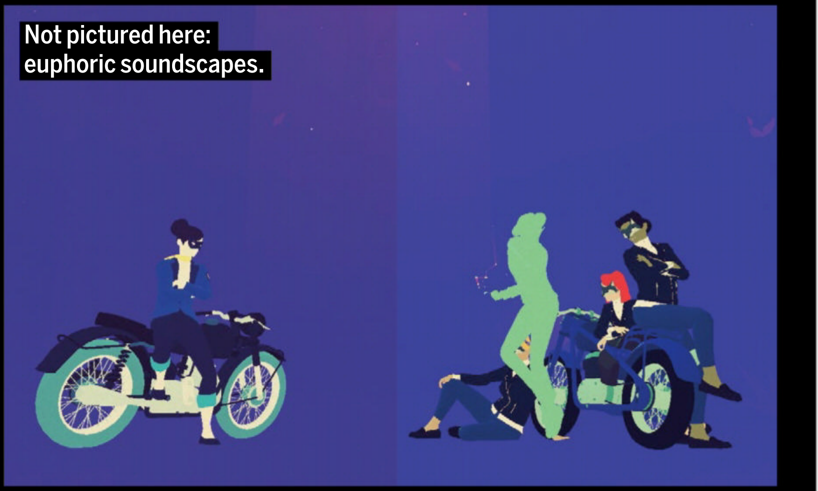
Shapes and beats in SAYONARA WILD HEARTS

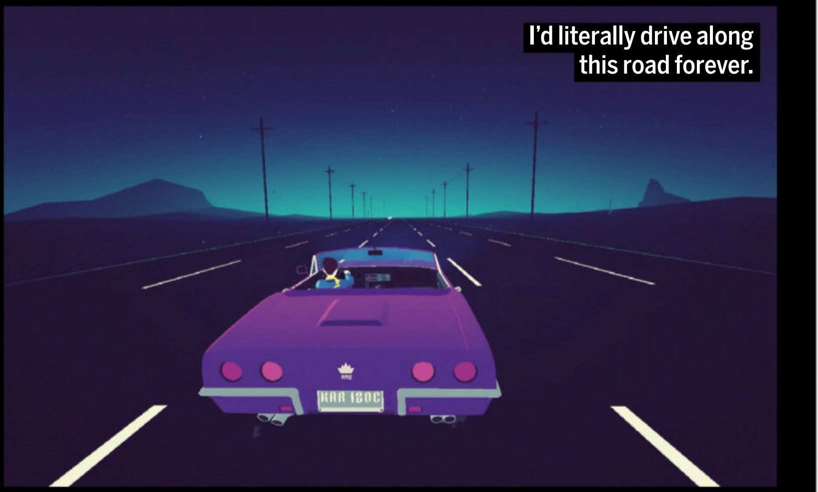
It's not that I didn't want to love *Sayonara Wild Hearts* – its tenuous inclusion in this month's They're Back, purely because it has a Japanese word in the title, should be evidence enough of that. It's just that playing it makes me feel like a 1970s gas fire in a Scandi flat. I don't belong here.

I feel like a grandad on amphetamines, and I mean that quite literally, rather than as a journalistic cliche: I'm confused, the lights are too bright, I'm having heart palpitations. I'm beginning to worry that I've become the personification of those awful Twitter trends where people admit they secretly hate something brilliant and I'll have to spend the rest of my days lying to everyone I admire.

Then, mercifully, it clicks. Before I have the chance to get 'good' at *Sayonara Wild Hearts*, it switches things up. I expected it to just be motorbikes and synesthesia, so I can't help but be dragged along by the reckless, throwaway levels of invention. It does that classically Nintendo thing of barely giving you enough time to understand why you love a level before distracting you with another glowing bauble. I'd honestly have played the car level for an entire game. That's a game that probably exists. But just as a system starts to feel familiar, the world inverts and delivers something unexpected. Perhaps my only real source of irritation with *Sayonara Wild Hearts* is that some of the levels feel too short. It doesn't diminish the experience, though: as well as being an invigorating vision of style and sounds and shapes, *Sayonara Wild Hearts* ends up feeling like a strangely reflective celebration of a life spent playing games. ■

84


Not pictured here: euphoric soundscapes.


I'd literally drive along this road forever.

NEED TO KNOW

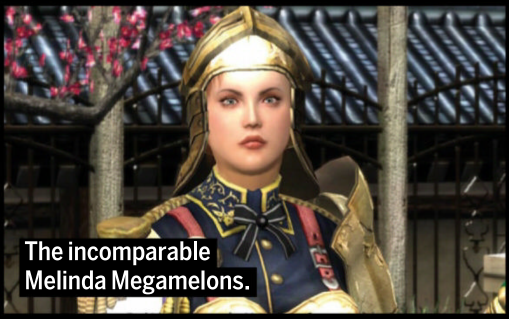
EXPECT TO PAY	DEVELOPER	PUBLISHER
£10.30	Simogo	Annapurna Interactive

You only notice the convenient cannon after the guards die.

SHADOW TACTICS: BLADES OF THE SHOGUN

Analysing stealth in games is like reading self-improvement posts on Medium or remembering how intelligent pigs are while tucking into a pork chop: you know it's wrong but you'd rather not think about it. Because as brilliant as *Shadow Tactics* is, there's no way even the most feckless guard would miss a samurai scuttling in front of them or an elderly sniper perched on a rooftop. Thankfully, the meticulous construction and cast of likeable characters means that most of the time I'm too busy wondering how I'll circumvent the next obstacle to think about line-of-sight idiosyncrasies. ■

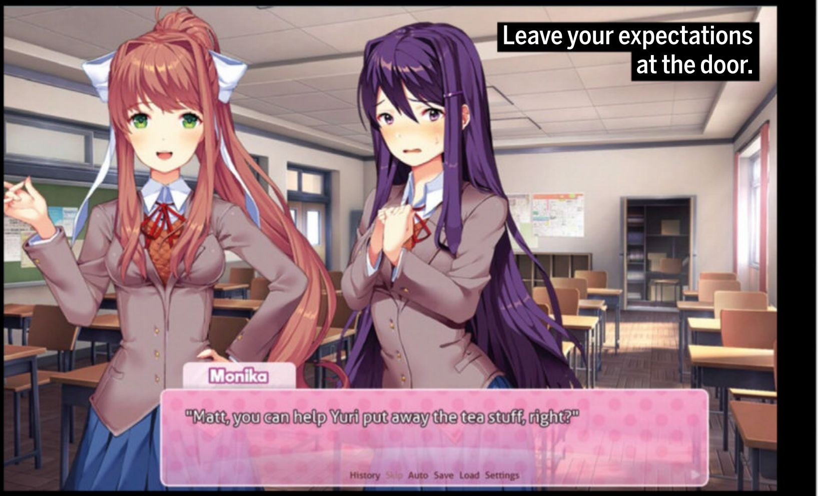
86


The incomparable Melinda Megamelons.

WAY OF THE SAMURAI 4

It's unlikely either of the samurai-themed *Yakuza* games, *Ishin!* or *Kenzan!*, will ever get released in the West. And in the meantime, the closest you're likely to get is Acquire's *Way of the Samurai* series. They have a few things in common, but whereas *Yakuza* at least makes some pretence towards realism, *Way of the Samurai 4* gifts us such nuanced, thoughtful creations as Melinda Megamelons: part Royal Marine Commander, part libidinous teenager's history book etching. This baked-in weirdness actually makes an average game more compelling but the already iffy experience isn't helped by this wobbly PC port. ■

57


Monika

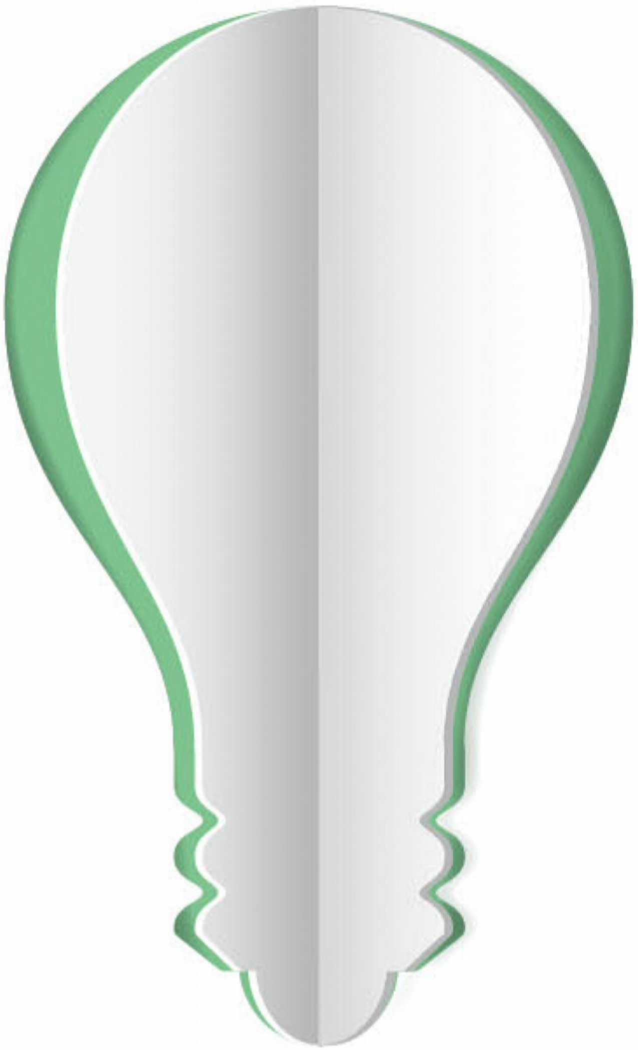
"Matt, you can help Yuri put away the tea stuff, right?"

Leave your expectations at the door.

DOKI DOKI LITERATURE CLUB

This is one of those 'take my word for it' reviews, because telling you exactly why it's amazing would ruin the experience. And it's a hard sell: on the surface, *Doki Doki Literature Club* features wistful teen romance in a Japanese high school and looks like the sort of sexed-up, saccharine visual novels you find between the seat cushions of Steam. But nothing here is what it seems. On a second playthrough, it's surprising how it subverts expectations, even if nothing compares to that first big reveal. ■

78



PAPER POWER

60% of the energy used to produce paper and paper packaging in Europe comes from renewable sources.

Discover the story of paper

www.lovepaper.org

LOVE
PAPER

Source: Confederation of European Paper Industries (CEPI), 2018
CEPI represents 92% of European pulp and paper production

HARDWARE

GET THE PC YOUR GAMES DESERVE

ROG STRIX
STRIX B550-E GAMING
SupremeFX
STRIX
REPUBLIC OF GAMERS
DARE TO PLAY
THE CHOICE OF CHAMPIONS

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GROUP TEST
Putting AMD motherboards through their paces.

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TECH REPORT
What does 'chiral' mean, and why does it matter to your PC?

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BUYER'S GUIDE
Build your perfect PC with our expert guides.

GROUP TEST

AMD MOTHERBOARDS

The best X570 and B550 motherboards for AMD Ryzen.

By Jacob Ridley & Alan Dexter

CARBON
LIGHTNING Gen4 M.2
AUDIO BOOST
msi

Perhaps the most nuanced part of any PC build, the humble motherboard is not often the star of the show when putting together your parts list. Nevertheless, that shouldn't mean you pay any less attention to choosing a suitable one – and that's where our handy guide comes in.

With AMD Ryzen closing the gap on Intel in gaming performance, many of us are choosing to opt for team red's processors for our builds. That means compatible AM4 motherboards are more crucial than ever. But there's also more competition, so we've put in the hours testing and tinkering to uncover the wheat from the chaff.

1

2
ESS SABRE HIFI
AORUS
DIRECT TOUCH
X570 AORUS MASTER
Socket AM4
DDR4
USB TurboCharger

MPG X570 Gaming Pro Carbon WiFi

MSI **£240**

The best AMD X570 motherboard

1 If you want to get the most out of your 3rd Gen Ryzen CPU without dropping enough cash to make an Nvidia RTX 20-series graphics card shudder, then the MSI MPG X570 is the way to go. It's functionally equipped for near-enough anything, within reason, and should have no qualm with speedy memory up to 4,400MHz (effective) and a little bit of overclocking.

Not that AMD's Ryzen lineup is particularly partial to either, however. Overclocking is more or less a no-go for all but the most extreme users, and your best bet for memory is to pick up a kit around the 3,600MHz mark, in order to maximise performance without putting up with any unwanted drawbacks.

Perhaps that's why even an X570 as relatively humble as the Gaming Pro Carbon is still a hard sell for most since the release of the B550 chipset. Anyways, we'll get to that. If you must have the absolute pinnacle of platform performance, the MSI MPG X570 Gaming Pro Carbon WiFi is definitely the one to get.

PC GAMER VERDICT

- → Twin PCIe 4.0 M.2 Slots
- → Wi-Fi 6 Compatible
- → Heatsinks aplenty

SPECS CHIPSET: X570 / **SIZE:** ATX / **MEMORY SUPPORT:** 4X DIMM, UP TO 128GB, DDR4-4400 / **EXPANSION SLOTS:** 3X PCIE 4.0 X16 (X16/X8/X4), 2X PCIE 4.0 X1 / **STORAGE:** 2X M.2, 6X SATA 6GBPS / **REAR USB:** 6X USB 3.2, 2X USB 2.0

X570 Aorus Master

GIGABYTE **£340**

The best high-end board for overclocking

2 This X570 motherboard remains one of the best options for any high-end AMD Zen 2 build. There are several reasons for this, but the three M.2 slots, great wired and wireless networking, and expansion possibilities are the top the list. Yes it's one of the more expensive options, but you really do get a lot of motherboard for your money, and on top of that it's utterly reliable too.

The 14-phase VRM design ensures your CPU is getting lots of clean power, which in turn makes this one of the best options for overclocking your Ryzen 3000 processor of choice. All that metal atop of the VRMs helps keep things cool, as does the massive plate that covers the rear of the board. The M.2 slots all have heat spreaders, and the expansion and memory slots are reinforced as well.

The only real mark against it, other than the price, is that if you do use all three M.2 slots you only get four SATA ports to play with. Still, this is a sturdy and well thought out board that will serve you well for a good while.

PC GAMER VERDICT

- → Excellent performance
- → Great networking options
- → Reliable and sturdy design

SPECS CHIPSET: X570 / **SIZE:** ATX / **MEMORY:** 4X DIMM, UP TO 128GB, DDR4-4400 / **EXPANSION SLOTS:** 3X PCIE 4.0 X16 (X16/X8/X4), 1X PCIE 4.0 X1 / **REAR USB:** 6X USB 3.2, 4X USB 2.0 / **STORAGE:** 3X M.2, 6X SATA 6GBPS

YOU STILL GET ACCESS TO A COUPLE OF PCIE 4.0 COMPATIBLE PORTS

ROG Strix B550-E Gaming

ASUS **£230**

The best AMD B550 motherboard

3 The Asus ROG Strix B550-E Gaming isn't actually that much cheaper considering it's using the B550 chipset. But I also think that just goes to show how little potential you're missing out if you're going with the secondary 500-series chipset.

The features missing between the X570 and B550 are few. The lack of a PCIe 4.0 interface between the CPU and chipset with the latter essentially means it isn't privy to the same bandwidth as its bigger sibling, yet PCIe 4.0 bandwidth is available direct from the CPU itself. Hence why you still get access to a couple of PCIe 4.0 compatible ports.

You'll find a few USB ports missing from the board too unfortunately, but at least with the ROG Strix such losses are nothing that a USB hub or gaming monitor with one built-in can't fix. Overall, everything you could possibly need for a mid- to high-end AMD gaming PC is included with the ROG Strix B550-E – in other words, this is the complete package.

PC GAMER VERDICT

- → Feature rich
- → High quality
- → Superb networking

SPECS CHIPSET: B550 / **SIZE:** ATX / **MEMORY:** 4X DIMM, UP TO 128GB, DDR4-4600 / **EXPANSION SLOTS:** 2X PCIE 4.0 X16 (X8/X8), 1X PCIE 3.0 X16 (X4), 2X PCIE 3.0 X1 / **REAR USB:** 6X USB 3.2, 4X USB 2.0 / **STORAGE:** 2X M.2, 6X SATA 6GBPS

B550 Taichi

ASROCK **£305**

An expensive alternative

4 The ASRock B550 Taichi takes the B550 chipset's more affordable price tag and rips it to shreds. As you can probably tell this is no budget board. In fact, you can often find ASRock's X570 Taichi for the same price, or often even less. So why would anyone out there opt for the 'mid-range' chipset instead?

The simple fact of the matter is that the B550 chipset's specifications are so close to those of the X570 that you really don't miss out on much. There's a fine line between B550 and X570, and the Taichi straddles it: one foot in the affordable camp, another in the 'we put RGB on everything' camp.

RGB is but one of the features available to you with the Taichi B550. It also offers a generous helping of SATA ports, ready and able VRM, WiFi 6, 2.5GbE, and some aggressive brushed metal armour plating, which kind of makes it feel more bad ass.

While you may receive a second-tier chipset in name, you'd be hard pressed to notice once it's at home inside your PC.

PC GAMER VERDICT

- → Feature rich
- → High quality
- → Cheaper X570 boards

SPECS CHIPSET: B550 / **SIZE:** ATX / **MEMORY:** 4X DIMM, UP TO 128GB, DDR4-5000 / **EXPANSION SLOTS:** 3X PCIE 4.0 X16 (X8/X8/3.0X4), 2X PCIE 3.0 X1 / **REAR USB:** 6X USB 3.2, 2X USB 2.0 / **STORAGE:** 2X M.2, 8X SATA 6GBPS

X570 OR B550?

Nowadays your choice of 3rd Gen Ryzen compatible motherboard boils down to one of two chipset choices: X570 or B550.

At the top you've got the X570 chipset. Every manufacturer will have a handful of boards equipped with one and that's because it delivers the most in terms of functionality. Essentially, if you want your AMD Ryzen chip with all the toppings, an X570 motherboard is the way to go.

But before you rush to the checkout, it's worth noting that the B550 chipset is no slouch, either. In fact, it offers much of the same versatility and functionality as the X570, with only a few caveats. A B550 motherboard may have fewer USB ports and SATA ports than an X570, but if you can make do then you'll save a heap of cash.

Both chipsets share support for PCIe 4.0 bandwidth – the X570 across all ports and the B550 across the top PCIe slot and NVMe slot. This support offers more bandwidth than the endemic PCIe 3.0 standard today, and allows for super-fast NVMe SSDs to reach new highs.

A PCIe 4.0 SSD is by no means a must-have in the gaming world, but with greater numbers of compatible SSDs hitting the market, it won't be long until we're swimming in super-fast storage. And with next-generation game engines ramping up requirements, who knows how long it will be until we see all that performance put to good use.

MAG B550M Mortar

MSI **£149**

An affordable alternative

5 The MSI MAG B550M Mortar manages to fit the budget bill, at least more so than the ASRock Taichi. It's fit for purpose too, with just enough of everything to keep most PC builders happy, and comes in a compact Micro-ATX package so that you can shrink your entire PC build down around it and save a little space.

Unfortunately, a decent feature set and construction does come at a cost: you will have to forgo WiFi support in favour of a wired ethernet connection. That's preferred for gaming, and is the ideal networking solution if you're able to make it work without causing a trip hazard. There's also the Mortar's sparse rear panel, which leaves a lot to be desired when it comes to USB ports and connectivity. You'll find only six USB ports on the rear I/O, which will be gobbled up fast by today's standards. . However, where the MSI Mortar does excel is in performance testing, and it's proven itself to be a dab hand across most benchmarks and keeps ahead of the other affordable boards we've tested.

PC GAMER VERDICT

- → Competitive pricing
- → Superb build quality
- → No WiFi

SPECS CHIPSET: B550 / **SIZE:** MICRO-ATX / **MEMORY:** 4X DIMM, UP TO 128GB, DDR4-4400 / **EXPANSION SLOTS:** 1X PCIE 4.0 X16, 1X PCIE 3.0 X16 (X4), 2X PCIE 3.0 X1 / REAR USB: 4X USB 3.2, 2X USB 2.0 / **STORAGE:** 2X M.2, 6X SATA 6GBPS

TUF Gaming B550M-Plus WiFi

ASUS **£150**

Delivering the basics

6 If you can't give up wireless connectivity then the Asus TUF Gaming WiFi is our recommendation on a budget. The TUF branding has flipped into the affordable these past few years, but there's still a little of that old school aesthetic leftover from the days of absurdly heavy-clad TUF motherboards.

The feature set is a little more expansive than the MSI Mortar, but that comes at the cost of off-the-pace performance. While we're only talking a couple of frames at most, the TUF Gaming was often found lagging behind the other B550 motherboards we tested. The decision between this and the MSI Mortar comes down to whether you absolutely require WiFi direct from the chipset or not. If it's a must and you don't want to give up a precious port on your Micro-ATX motherboard for an add-in WiFi card with the Mortar then the TUF Gaming offers a decent selection of ports for a handful of SSDs and USB devices in a simple and sturdy package. And it's on the cheaper end of the market.

PC GAMER VERDICT

- → Well-rounded
- → Just the essentials
- → Slower than some

SPECS CHIPSET: B550 / **SIZE:** MICRO-ATX / **MEMORY:** 4X DIMM, UP TO 128GB, DDR4-4600 / **EXPANSION SLOTS:** 1X PCIE 4.0 X16, 1X PCIE 3.0 X16 (X4), 1X PCIE 3.0 X1 / **REAR USB:** 6X USB 3.2, 2X USB 2.0 / **STORAGE:** 2X M.2, 4X SATA 6GBPS

Dr Jessica Wade, of Imperial College London's chemistry department.

Image credit: Thomas Angus, Imperial College London

GOING CHIRAL

How the twist of a photon can make all the difference

Chiral – pronounced Kai-ral after the Greek letter Chi – is not a word Hideo Kojima made up while developing *Death Stranding*. Sam Bridges' Chiral Network is complete nonsense, obviously, but chirality is a common property of molecules and even light that occurs naturally and, with a bit of help from us, is helping create the electronics of the future.

Consider the mantis shrimp, if you dare. These predatory crustaceans come in two types: the smashers with a pair of legs adapted as clubs, and the spearers who have evolved barbed tips to their appendages. What they both have in common are incredible eyes, with up to 16 types of photoreceptor cell (humans bumble around in relative darkness with only three) some of which can detect circularly polarised light, which they might possibly use to signal to one another. This circular polarisation means that while the light waves continue to move in a straight line, their electromagnetic fields rotate perpendicularly (at a right angle) to this direction. Photographers will know this from the circular polarising filters that can be screwed onto a camera lens to increase colour saturation and contrast in a scene at the cost of a little brightness.

Think of chirality, therefore, as handedness, or the direction of a helix. It may twist to the left, or to the right. Think of your hands, or look at them if you have them nearby. Put them palm to palm and their shapes match, but put one on top of the other and they're clearly different. Chiral structures are everywhere – in the shells of snails, in the shapes of pasta, in the screws holding your desk together. In the world of molecules, chirality is important: a collection of atoms that twists one way may unblock your stuffy nose, but become methamphetamine if it spirals the other. Please don't write in to tell us that crystal meth also unblocks your nose.

SPIRALLING OUT

"There's lots of different things that I think are fascinating about chiral materials," says Dr Jessica Wade, a research associate at Imperial College London's chemistry department who studies circular polarisation. "We use them in LED displays, to make the screens of computers and mobile phones. What we're trying to do there is to increase the efficiency of the display and improve battery life, because at the moment if you have an OLED there's an anti-glare filter in front of the pixels, and what this is made of is basically a circularly polarising filter, which is very efficient at cutting glare. But when you've got pixels that are emitting unpolarised light, which is 50 percent left-handed and 50 percent right-handed, you lose half of it in that filter. So we're spending a huge amount of battery power trying to push as many photons as possible through this filter, which could go on other

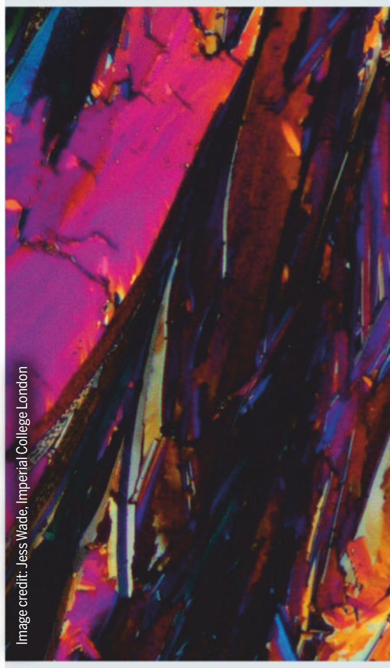
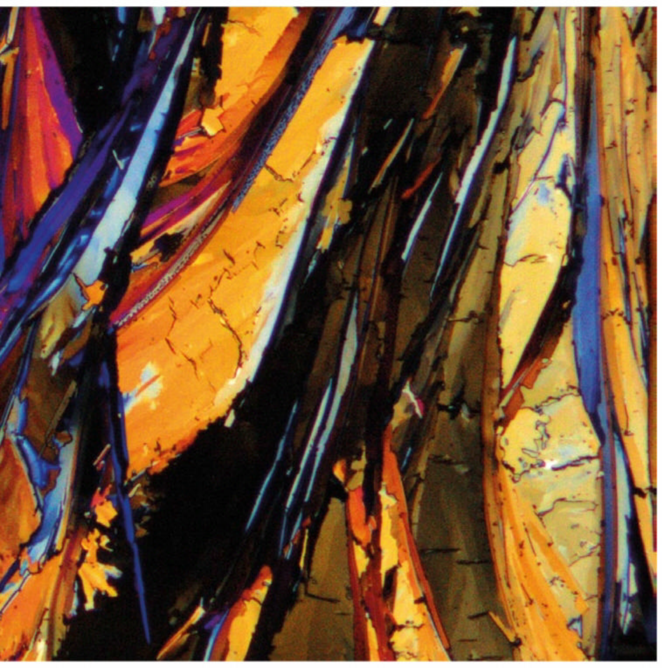
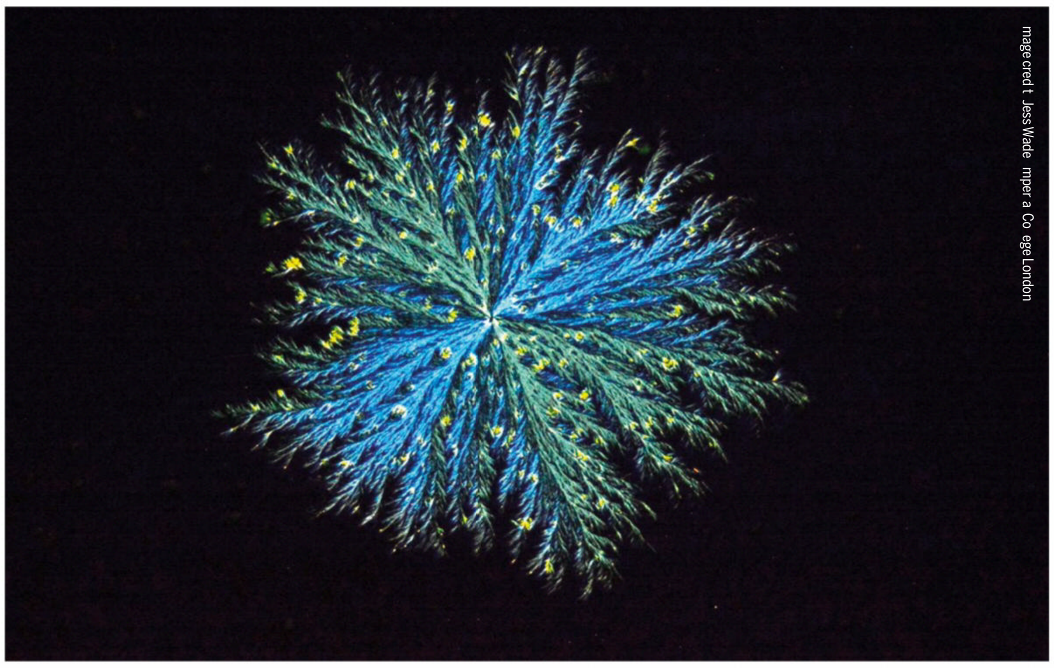


Image credit: Jess Wade, Imperial College London

Side effects

Another, awful, example of chirality is the drug thalidomide. One chiral form of the drug was recognised as dangerous, so was filtered out before it was given to pregnant women for morning sickness. What wasn't realised was that in the body it reverted to 50 percent left/right handedness, and the dreadful results of this oversight can be Googled.





LEFT: A chiral liquid crystal material that rotates the plane of polarisation in linearly polarised light.

RIGHT: A small chiral molecule nucleating out of a non-chiral material.

Image credit: Jess Wade, Imperial College London

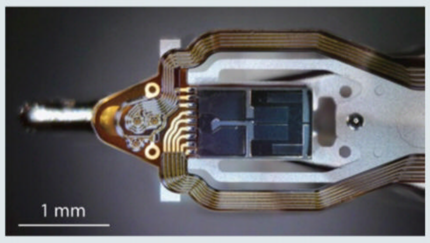
CHIRALITY IN THE REAL WORLD *Chiral materials don't just exist on the lab*

1 JEWEL BEETLE

The shell of the jewel beetle looks different to another beetle, which can detect the chiral patterns on it.

2 MANTIS SHRIMP

The mantis shrimp uses circularly polarised light to send messages to other mantis shrimp.



3 HARD DRIVE READ HEAD

Hard drive read heads were made much more sensitive thanks to the discovery of spintronics.

4 CRYSTAL METH

It's possible to analyse the chirality of methamphetamine to tell if it was legally or illegally produced.

things. If you could make the light intrinsically circularly polarised, then you could really increase the efficiency of the screen and massively improve battery life."

LIGHT READING

Power efficiency is a huge deal in computing at the moment, especially as the power-hungry 5G connectivity continues to roll out across the country. Screens are big consumers of energy while on, but on a phone they spend a lot of their time off. On a laptop PC, however, it's likely to be on all the time you're using it, and that can really eat into battery life. Human eyes can't differentiate between left- or right-handed light – we bow to the mantis shrimp here – but it can be detected in other ways, leading to possibilities for future encryption technologies based on polarised light. "If you want to encrypt something, and you make the sequence of light chiral, then you can only really detect it if you know that's what you're looking for," says Wade.

POWER EFFICIENCY IS A HUGE DEAL IN COMPUTING AT THE MOMENT

"Almost everything in the human body is chiral," she continues. "Sugars are chiral, DNA is chiral, amino acids are chiral. It's fascinating how often it manifests, but it's hard to explain because we don't see it. Tech is beginning to realise how cool it would be if we could use chiral structures to generate circularly polarised light or even manipulating the quantum properties of electrons."

We're way beyond high-school physics classes here. Electrons exist as pairs, with different quantum states referred to as 'spin'. It's been shown that, as electrons move through a chiral material, you can filter by spin depending on the handedness of the material.

How does this help? Well, there's a whole branch of electronics known as spintronics, and it affects something close to our hearts: hard drives. The first storage device to use a 'spin valve' to alter the magnetic state of materials at the molecular level with data storage in mind came in 1997, with the massive 16.8GB IBM Deskstar Titan. These days, every spinning hard drive uses the technique to some degree, hugely shrinking the magnetic impulses that can be detected as the read head moves over the surface and therefore increasing the density of data that can be written.

"Chiral materials have all these fascinating properties at room temperature," says Wade. "The way you used to do spintronics was to make things incredibly cold, liquid helium cold, but chiral materials allow you to do this on a small scale without expensive to produce inorganic materials." Wade is a chemist, so uses 'inorganic' to mean materials that aren't carbon-based. She works with carbon in the graphene family, but graphene itself is flat so cannot be chiral, although it is possible to roll it up into chiral nanotubes.

We talk a lot in this column about using new materials to enhance familiar processes, and we're there yet again. Kojima may have hit on a novel idea in *Death Stranding*, but the science behind it is sound, and it is likely to affect all of our lives in the future, even if it doesn't lead to an internet connection that runs at the speed of light. ■

Ian Evenden

YOUR NEXT PC

BUYER'S GUIDE

Build the best PC for your budget

ADVANCED
MID-RANGE
BUDGET
PHANTEKS

KEY

Budget build

PC gaming is for everyone. Pick the parts you want to build a new, well-rounded PC for a good price.

Mid-range build

You want to run every new game at 1080p 60fps. This recommended build will see you through.

Advanced build

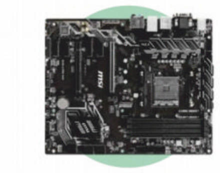
You're looking for the best PC on the market and superior components. But you still want to spend smart.

BUDGET BUILD

Enjoy 1080p gaming without breaking the bank

TOTAL
£849

MOTHERBOARD



B450-A Pro Max

MSI **£95**

A healthy dose of ports and PCIe SSD support has this B450 at the heart of our budget build.

PROCESSOR

Ryzen 3 3300X

AMD **£115**

AMD has packed its latest Zen 2 architecture into a speedy four-core package, and that's great for gaming.

GRAPHICS CARD

GeForce GTX 1650 Super

Gigabyte **£165**

The GTX 1650 Super is much more than a rebrand of the GTX 1650, securing it the budget crown.

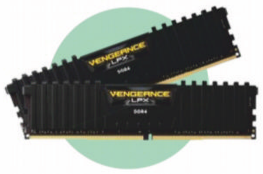
COOLER

Wraith Stealth

AMD **Free with the CPU**

Gone are the days when a stock cooler was little more than a bonus paperweight. AMD's Wraith Stealth delivers.

MEMORY



Vengeance 8GB DDR4 (2x4GB)

Corsair **£40**

The new norm for gaming is 16GB, but dual-channel 8GB memory is enough to get by for most.

POWER SUPPLY

CX Series CX550

Corsair **£74**

Corsair's reputation for quality PSUs precedes them. You know you're in safe hands here.

SSD

WD Blue SN550 500GB

Western Digital **£67**

Just because it's a budget SSD, doesn't mean it has to be slow, as the WD SN550 proves with its speedy NVMe connectivity.

HDD

WD Blue 1TB 7200rpm

Western Digital **£37**

You don't necessarily need a HDD in 2020, but if you're a virtual hoarder, this'll give you loads of useful extra space.

CASE

Neos

BitFenix **£36**

You'll want to minimise how often you rebuild your PC, so make sure to give it a good home. This case'll do nicely.

DISPLAY

GW2280

BenQ **£105**

A 1080p60 VA monitor will see you through in style and, once you upgrade, will make a superb second monitor.

KEYBOARD

G213

Logitech **£40**

It may be a membrane switch board, but it's stylish, and well-built. Sometimes that's worth more than cheap clicky switches.

MOUSE

G102

Logitech **£35**

A classic shape delivered in a sleek shell, this mouse fits all hand sizes and grips. A solid option for the money.

HEADSET

HS35

Corsair **£40**

This headset delivers in-game with its punchy drivers and clear microphone – perfect for video calls and multiplayer alike.

MID-RANGE BUILD

Our recommended build for playing the latest games

TOTAL
£1,455

MOTHERBOARD

B450 Tomahawk Max

MSI **£120**

A reliable platform for your build, the Tomahawk Max also comes in black to complement any style.

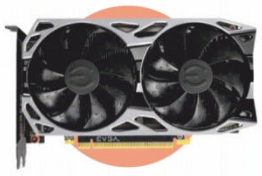
PROCESSOR

Ryzen 5 3600X

AMD **£198**

This CPU is one of the greats, and uses the Zen 2 architecture to dominate in gaming and productivity.

GRAPHICS CARD



GeForce RTX 2060 KO GAMING

EVGA **£320**

The RTX 2060 is a taste of the good life, where frame rates are high and real-time ray tracing is possible.

COOLER

Wraith Spire

AMD **Free with the CPU**

We love a freebie, especially one as capable as the cooler included with the 3600X. This'll keep your machine running smoothly.

MEMORY

Ballistix 16GB DDR4 (2x8GB)

Crucial **£75**

With plenty of capacity at 16GB, this unembellished memory has everything you need for gaming and more.

POWER SUPPLY

CX650M

Corsair **£93**

The heart of your gaming PC is your PSU, and this 650W Corsair promises to keep your rig ticking nicely.

SSD

S70 1TB

Addlink **£150**

Building on a budget doesn't mean sacrificing speed—the Addlink S70 proves you can indeed have both.

HDD

WD Blue 1TB 7200rpm

Western Digital **£37**

Just like in the budget build, this HDD isn't strictly necessary, but for a pretty low price it's nice to have plenty of extra space.

CASE

Eclipse P400S TG

Phanteks **£70**

An ATX case is all you need for this build. We like this one because it's simple, functional, and really nice to look at.

DISPLAY

AOC G2590FX

AOC **£173**

Everything a PC gamer could want: 144Hz refresh rate, 1ms response time, and it's AMD FreeSync and Nvidia G-Sync compatible.

KEYBOARD

Alloy FPS

HyperX **£80**

As the name suggests, this keyboard is built like an absolute tank, with a steel frame and Cherry MX switches.

MOUSE

Model O-

Glorious **£59**

Lightweight and responsive, the Model O- has made a name for itself among streamers and pros thanks to its clever design.

HEADSET

Cloud Alpha

HyperX **£80**

Does it get any better than the HyperX Cloud Alpha? Well, yes, but not anywhere close to this sort of price point.

ADVANCED BUILD

Go above and beyond with a PC powerful enough to end worlds

TOTAL
£3,742

MOTHERBOARD

MPG Z490 Gaming Carbon WiFi

MSI **£260**

A heady mix of enthusiast motherboard functionality and build quality that stops short of god-tier motherboard pricing.

PROCESSOR

Core i9 10900K

Intel **£529**

If you want the fastest gaming CPU, look no further than Intel's flagship Core i9.

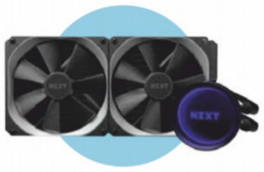
GRAPHICS CARD

GeForce RTX 2080 Super XC

EVGA **£762**

The RTX 2080 Super is the more reasonably priced super high-end enthusiast graphics card out of the Nvidia skunkworks.

COOLER



Kraken X63

NZXT **£123**

One of the most stunning AIO coolers rebuilt with an updated pump and, of course, RGB lighting for more pizzazz.

MEMORY

Vengeance RGB Pro 32GB DDR4 (2x16GB) @ 3,200

Corsair **£176**

If you truly want to show off, even your system memory should be aglow in RGB.

POWER SUPPLY

HX750i 80 Plus Platinum

Corsair **£163**

Platinum doesn't just sound good, it means this PSU is rated to the highest tiers of energy efficiency, too.

SSD

WD Black SN750 1TB

Western Digital **£169**

Western Digital are back on Samsung's heels with this brilliantly fast, yet affordable, 1TB M.2 NVMe SSD.

HDD

860 QVO 2TB

Samsung **£195**

Built on QLC flash memory, it's not the quickest storage around, but it's a speedy alternative to a HDD.

CASE

600C

Corsair **£135**

If you're going big on parts, you should grab a case that has plenty of room for upgrades down the line. This one will do just fine.

DISPLAY

Nitro XV273K

Acer **£780**

This one's an easy choice – 4K and 144Hz for under a grand is an offer we can't refuse, and neither should you.

KEYBOARD

G915 Lightspeed

Logitech **£210**

Low-profile mechanical switches are just the icing on the cake that is the superb, wireless Logitech G915.

MOUSE

G502 Lightspeed

Logitech **£110**

With a lengthy battery life and a phenomenal sensor to keep you gaming at your best, the G502 is undoubtedly one of the finest.

HEADSET

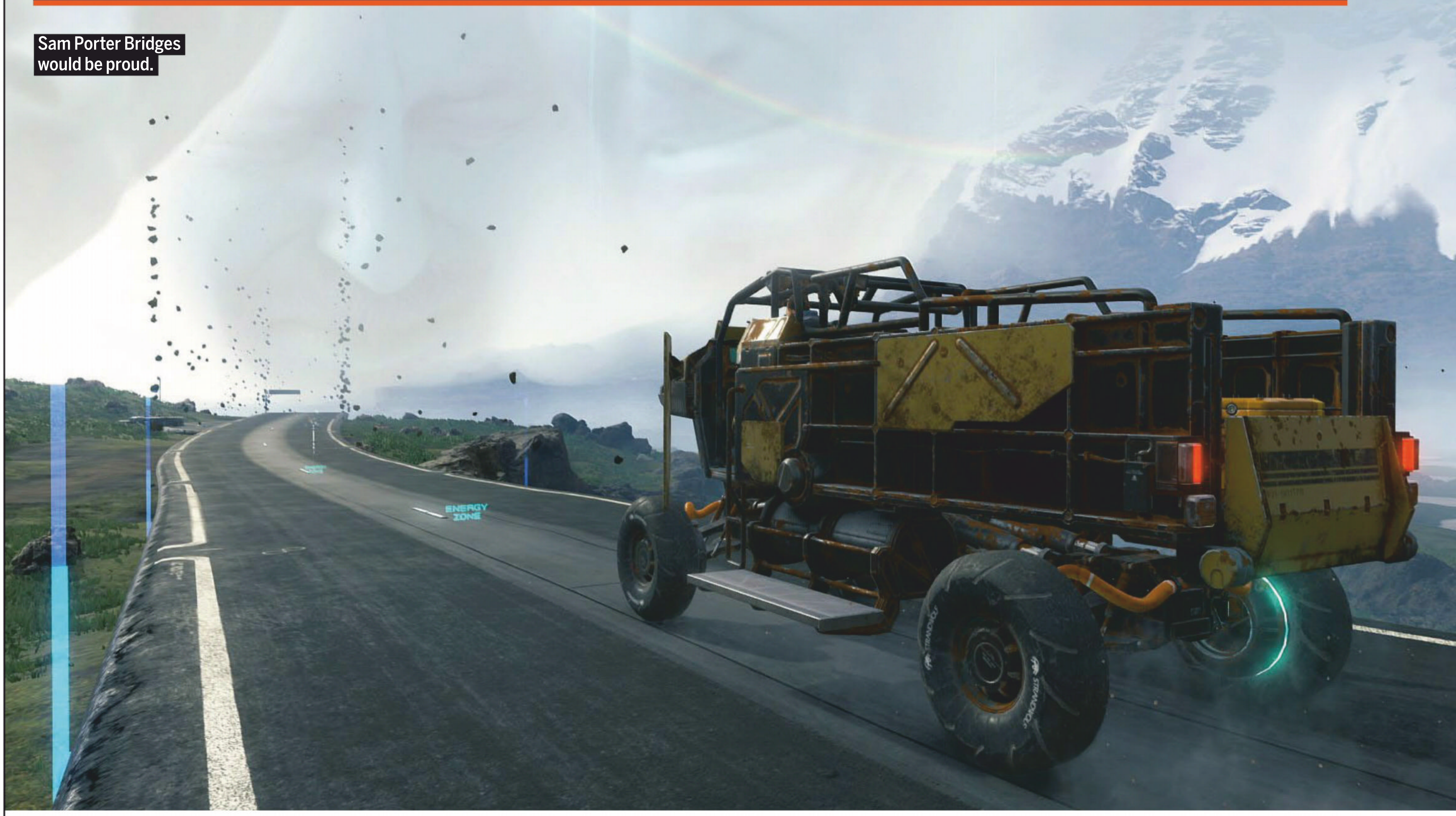
Arctis 7 Wireless

SteelSeries **£130**

If you've settled on a wireless keyboard and mouse, the last thing you want is a pesky cable to your headset.

EXTRA+LIFE

CONTINUED ADVENTURES IN GAMING


Sam Porter Bridges would be proud.

"I get a dumptruck's worth of Likes from all the strangers using my roads"

The end of the road in **DEATH STRANDING** is the beginning of a real one

No roads left to build. I made them all. America has been reconnected, at least physically. Chimerically? Nah. But that can wait. *Death Stranding*'s vast distances aren't so vast anymore. I can cross that timefall-blasted terrain in minutes in a truck. I've ignored the main quest for at least 20 hours, or two placid weeks of leisurely play now, focusing strictly on gathering ceramics, metals, and chiral crystals to rebuild a highway across the whole damn game. It's messed me up, man.

JAMES DAVENPORT

THIS MONTH
Got on a digital asynchronous convoy.

ALSO PLAYED
Horizon Zero Dawn, Carrion

I didn't do it for the sake of finishing *Death Stranding* with panache. I could've hoofed it on foot or offroad it with some basic wheels, no problem. I'm spending my time honing *Death Stranding* into a razor sharp efficiency machine because fantasy these days comes in the form of basic infrastructure and community need. Damn pandemic.

But every time I boot up *Death Stranding* and I get a dumptruck's worth of Likes from all the strangers using my roads, I remember the possibility of backyard potlucks, or even the newfound eroticism of city meetings about where the next street sign should go. I'll be first to speak at my next town hall, a notebook brimming with stop sign placement theory and foot traffic philosophy.

STRANDED

I don't know if *Death Stranding* would've made me think about infrastructure and community activism without the unique context of a global pandemic. I don't know if I'd suddenly lust for Interstate 90 and

I'VE BEEN GOING ON LONG DRIVES AS AN EXTENSION OF MY ROAD-BUILDING

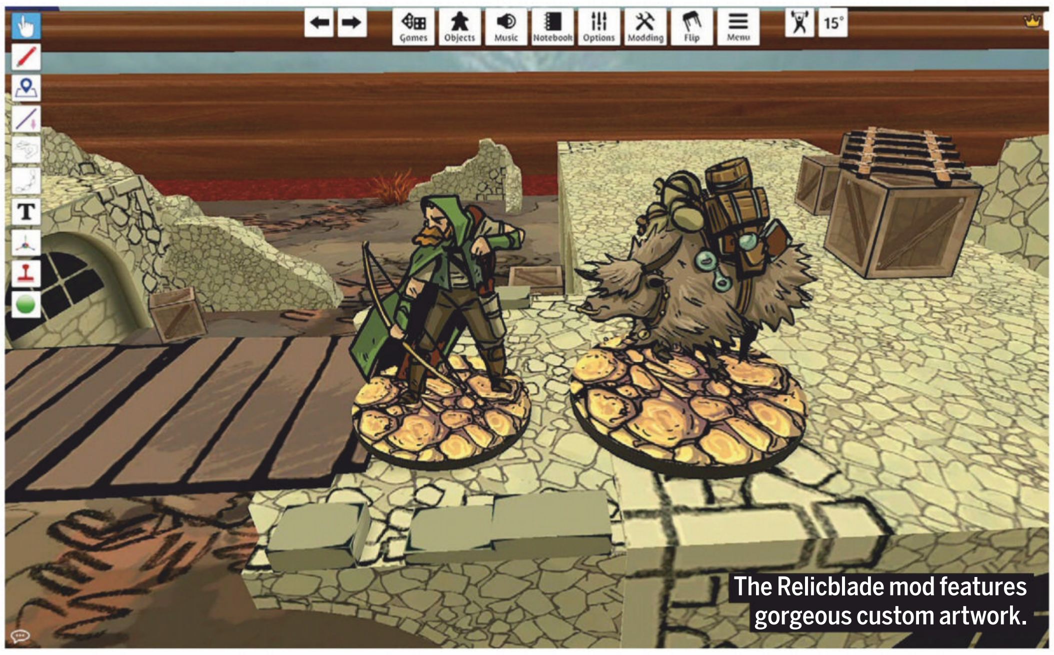
Give me the keys, Kojima.

Mountain silhouettes as familiar as my own shadow.

the 30-minute drive between Deer Lodge and Butte, Montana I slept through thousands of times as a kid. I'm not sure I'd visualise the space between my family and me like a map, tracing my own path through America between its northern and southern borders, making an X of Sam Porter Bridge's east-to-west path. But I know *Death Stranding* wants me to think about that stuff.

I've been going on long drives as an extension of my road-building obsession. Down here in Austin, Texas you get the confluence of hill country, prairies, and lakes, and the dry southern plains with the gulf's coastal weather blowing in like terrible timefall storms. Feels like a lost southern US *Death Stranding* region, really. I'll take backroads as they come, imagining myself hauling ceramics and metals and old toys to some outpost buried out there. I only wish I could actually help, actually deliver something.

Delivering made-up videogame resources on good faith someone besides me will get use out of them, doing it all to feel like a part of something bigger than myself might be a sign that I need videogames to do more *Death Stranding* things to me. There needs to be room for us to take something from games that isn't fleeting, empty feedback. Gut it all. Leave it at boredom and contemplation and me. Really integrate those systems and themes and send me on a road trip. ■



The Relicblade mod features gorgeous custom artwork.

"That sense of tactility is vital"

Board gaming in TABLETOP SIMULATOR

ROBIN VALENTINE

THIS MONTH
Forgot what 'the outside' smells like.

ALSO PLAYED
Remnant: From the Ashes, Spiritfarer

One of my resolutions for 2020, back before... all this, was to be more proactive with my tabletop hobbies. I'm good at buying little plastic models and big boxes of cardboard, but less good at making the time to play them with people. This year, that was going to change.

And, at first, it did. I had an old friend over for a day of SAGA: Age of Magic battles. I joined a wargaming club, and started getting weekly games of Warhammer Underworlds in. I got connections going with like-minded geeks in the local community.

Then the pandemic hit, and suddenly meeting up in person to take turns touching each other's toy soldiers didn't seem like such a hot idea anymore. At first my resolution seemed to have become impossible.

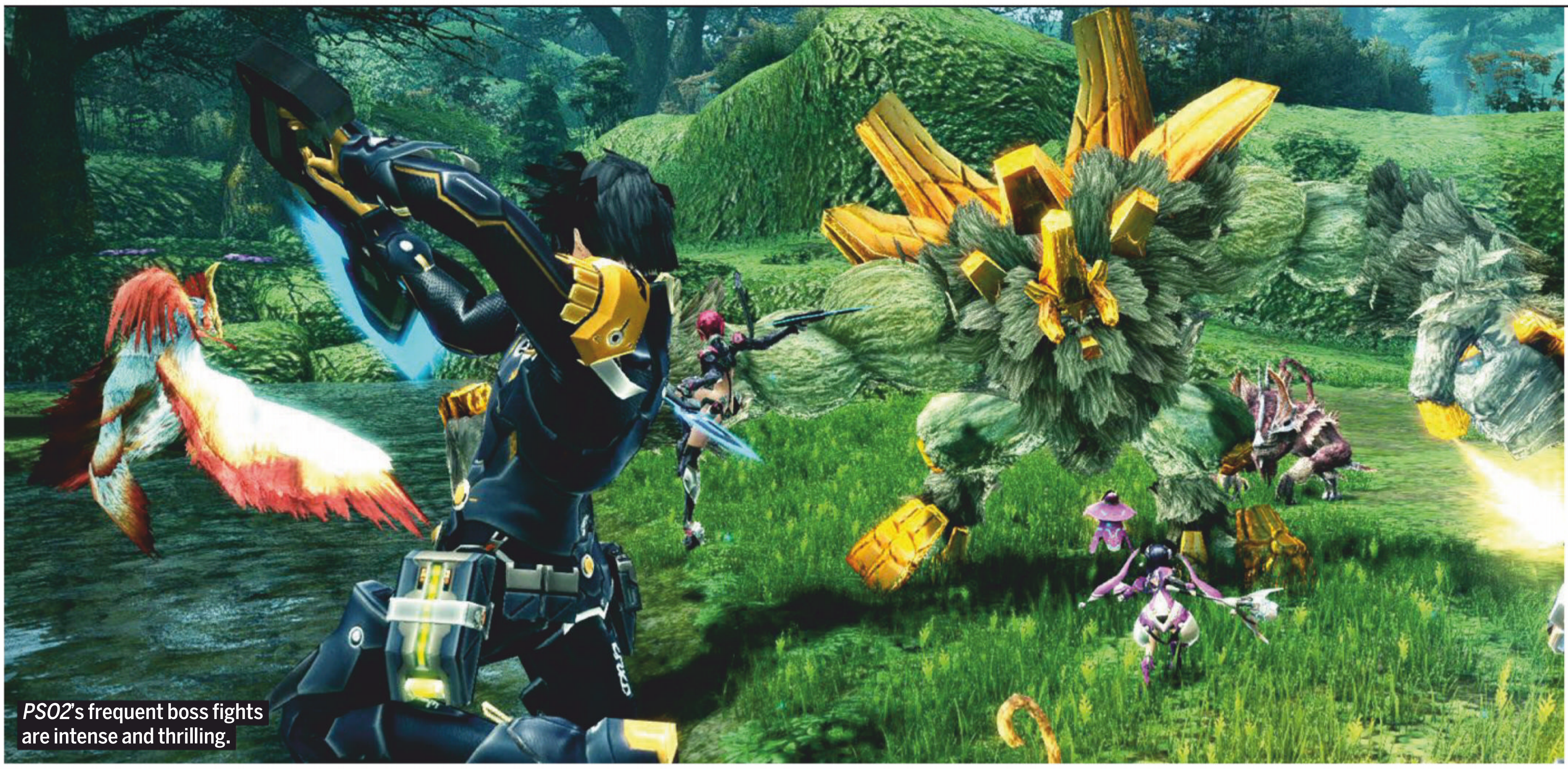
But the situation has ended up opening my eyes to how much tabletop gaming can be taken online. That Warhammer group quickly migrated to free board game simulator *Vassal*, with a whole new weekly league organised through a WhatsApp group – with the result that I've now played the game far more times with virtual pieces than I did with the physical ones.

While *Vassal* is very functional, however, it doesn't have much pizzazz about it – its 2D interface calls to mind an ancient browser game. You've got everything you need to play, and that's fantastic, but it doesn't really aim to recreate the *feel* of in-person gaming.

FLIP OUT

For that, I've turned to *Tabletop Simulator*. Half-game, half-platform, it more fully realises the play space, with 3D graphics and proper physics for your components. Countless board game companies have put in fantastic work to bring their games to the platform, many of them totally free, and I've had a blast introducing friends to Restoration Games' Unmatched (perhaps the only game where Dracula vs Sinbad is a normal pairing) and poking around in the beautifully put together digital version of indie wargame Relicblade.

It's hard to define what the difference is between a board game played digitally and a videogame, but *TTS* identifies that a sense of tactility is vital. By simulating phyiscal components, it recreates the satisfaction of moving pieces around to a degree that surprised me. You can even flip the table when you lose – what could be more faithful to the hobby than that? ■



PSO2's frequent boss fights are intense and thrilling.

"It's the perfect kind of indulgence that I'm craving right now."

PHANTASY STAR ONLINE 2 is an MMO that's embarrassingly easy to love

I've never been more embarrassed to like a game than I have *Phantasy Star Online 2*. On the surface, it's a grindy, free-to-play MMO with an obsession for scantily clad anime women wielding ridiculously large swords. Hanging out in the player hub, half the people I meet are either Gundam-style robots, barely clothed women, or barely clothed women robots. One of the outfits you can buy is just a shawl of soap bubbles that conveniently covers your breasts and genitals. It's absurd. But that's also part of the charm of *PSO2*. It's bursting with fan service and anime cliches while simultaneously being inventive, challenging, and damn good fun.

See, despite being an MMO, *PSO2* shares a lot more in common with games like *Diablo* and *Monster Hunter: World*. You take on missions in procedurally generated levels that typically end with a boss fight against an enormous and terrifying monster with elaborate attacks that require a lot of skill to dodge. By the time the battle is over, the field is scattered with gems noting all the loot that just dropped and is yours to equip or sell.

STEVEN MESSNER

THIS MONTH
Spent hours hunting for the perfect outfit.

ALSO PLAYED
League of Legends, Half-Life: Alyx

It's a simple loop that has proved endlessly entertaining to me these past few months – a perfect kind of mindless, fun that helps while away the hours in self-quarantine. *PSO2* doesn't ask much of you, just that you're willing to master your class and kick some ass.

PHINAL PHANTASY

Similar to *Monster Hunter*, there's nine classes that each rely on a specific weapon (or combination of them) that has its own unique abilities, attacks, and timings. Knowing how to combo these abilities together to do the most damage while also avoiding the near-fatal charge of a Quartz Dragon evokes the thrills of other character action games like *Devil May Cry* or *Bayonetta*. Except you're fighting on alien planets wearing a bikini.

It's a little droll, but *PSO2* has an uncommon understanding of what makes grinding fun. Other games, like *Destiny 2* and *Borderlands 3*, are constantly trying to stop players from finding ways to endlessly grind loot. *PSO2*, on the other hand, has a whole system where, with a little luck and some coordination with your three other human teammates, you can trigger an effect where enemies spawn endlessly on a timer. Keep killing at a rapid pace and the timer can extend indefinitely, creating an intoxicating explosion of colour and sound as a team fires every ability they have as quickly as they can while the battlefield is slowly covered in dozens of pieces of loot.

In a world where MMO loot is so often drip-fed, *PSO2* is the perfect kind of indulgence that I'm craving right now. It's that bag of Doritos I know I shouldn't finish in one sitting but will anyway, except the bag is bottomless and I can just gorge myself stupid. In the hell year of 2020, I'll take these excessive little pleasures wherever they come. ■

IT'S A SIMPLE LOOP THAT HAS PROVED ENDLESSLY ENTERTAINING TO ME

“Pulling it off feels like playing a symphony on my keyboard”

Learning to be quick on the draw with **DESPERADOS III**’s challenges

Playing through *Desperados III* was one of the most nerve-shredding experiences I’ve had at my PC since that time I received a dodgy email with my password in the subject line. There’s so much to juggle that by the end of each hour-long level I found myself reaching for the bottle of bourbon I thankfully no longer keep under my desk. And then the game flashes its badges – eight optional challenges you could’ve completed along the way but, in my case at least, invariably hadn’t.

With my nerves already in pieces, I’d just move right on to the next mission. But a few weeks have passed now, and I’m finally ready to go back. So I load up Troublemakers in Flagstone, the game’s first proper mission, and assess my to-do list. Some are simple enough. I snoop on ten private conversations. I kill a random guard named Josh, returning to his post from a friend’s funeral, then drag him right back and bury him in the open grave. (Sorry, Josh.)

With those ticked off, I scan what’s left. “Kill three mission targets at the same time.” My notes at this point are just an explosion of profanity, as I grapple with the seeming impossibility of this task. Flagstone is a frontier town with a central hub you can wander freely, plus four restricted and very separate areas each containing a single target. I have two cowboys to my name. How the hell am I supposed to...

Hang on. I think I might see a way. The key is Wild Marge, living it up in the local brothel. You can take her out by poisoning a whiskey barrel, then waiting for Marge to send one of the brothel’s dancing girls to the cellar to get her a top-up.

ALEX SPENCER

THIS MONTH
Whistled a digital John Wayne to death.

ALSO PLAYED
Fall Guys: Ultimate Knockout, What the Golf?

I WHISTLE EVERY FEW SECONDS TO INTERRUPT THE SPEECH THE DUKE DELIVERS

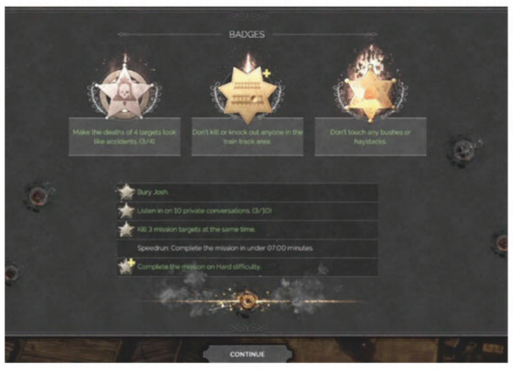
COWBOY UP

It’s a great plan, with two slight snags. One: my next target, the Duke, is in the middle of town at the moment it all goes off. And two: you can’t see inside a building after you leave it, meaning there’s no way to gauge how long Marge has got left.

The first I solve by jamming up the level’s clockwork a little. I stand on a chapel roof and whistle every few seconds to interrupt the speech that Duke delivers right beneath a handy, structurally unsound church bell. The second involves a lot of experimentation, quickloading and a timer set on my phone. Eventually, I’ve got two moves cued up – a revolver shot from a clifftop, a nudge of the bell. I hit the timer and the quickload button simultaneously, and perfect the half second’s gap between triggering each move to make sure they land at the exact same moment. Pulling it off feels like playing a symphony on my keyboard.

I’m flooded with relief, and then I scan the list again. “Speedrun: Complete the mission in under seven minutes.” My time, after a couple of replays and whittling my route to perfection: 35 minutes. Consarn it. Now where’s that dang whiskey? ■

I wonder who the dev named Josh after. Poor bloke.



BADGES

Make the deaths of 4 targets look like accidents. (3/4)

Don’t kill or knock out anyone in the train track area.

Don’t touch any bushes or haystacks.

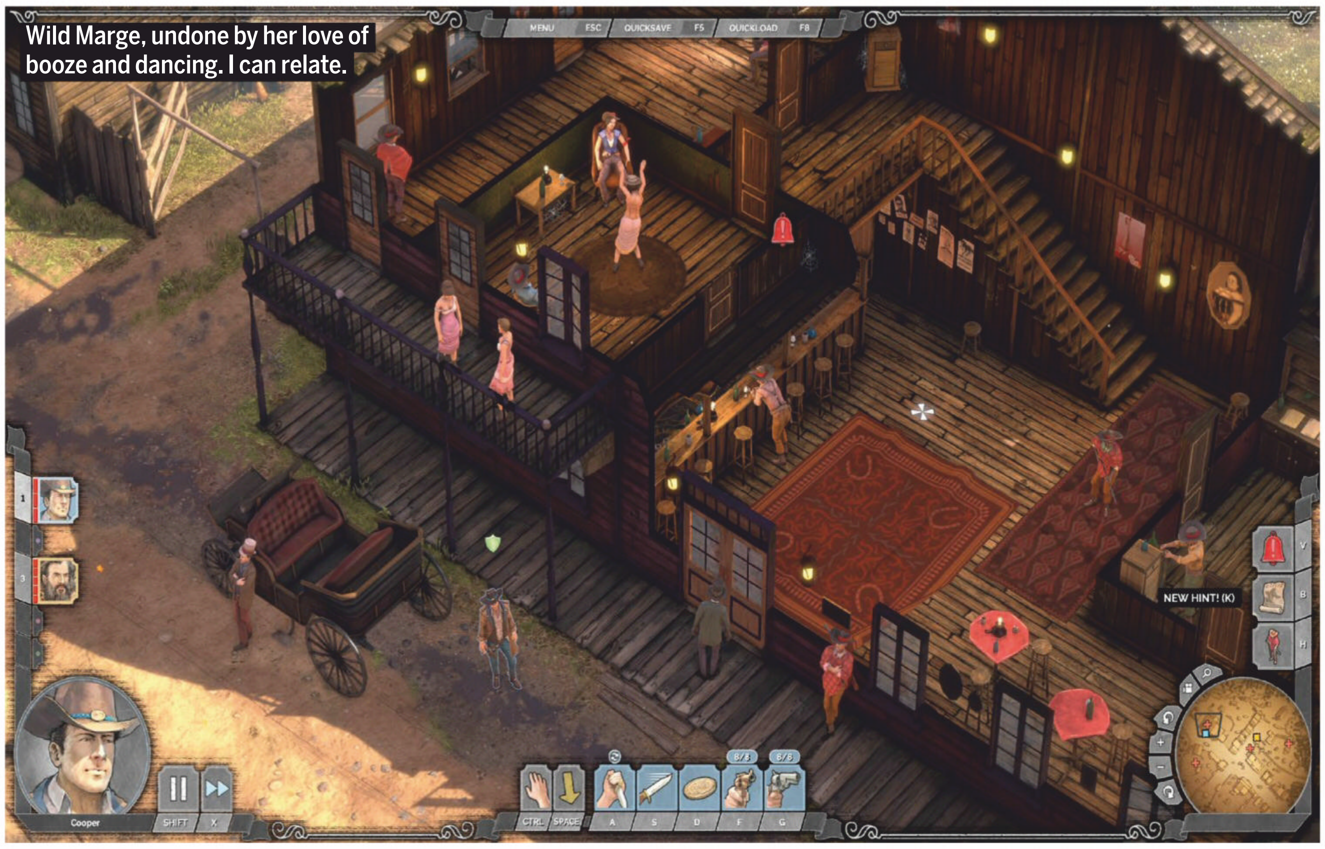
Bury Josh.

Listen in on 10 private conversations. (3/10)

Kill 3 mission targets at the same time.

Speedrun: Complete the mission in under 07:00 minutes.

Complete the mission on Hard difficulty.



Wild Marge, undone by her love of booze and dancing. I can relate.

NO MAN'S SKY

Exploring spooky derelict ships in the *Desolation* update.

By Andy Kelly

Hello Games' controversial space sim has always been about wonder and discovery. You don't think twice about jumping into a new system. You just slam the pulse drive and dive straight in, eager to see what strange creatures or alien worlds await you. It's optimistic sci-fi in the Star Trek mould, not the kind where cosmic horrors lurk around every black hole waiting to devour your ship.

But now, with the arrival of the *Desolation* update, *No Man's Sky* has taken a turn for the dark. To get started you can go to a space station and you'll see a new vendor, the scrap dealer, who will sell you a new item called an Emergency Broadcast Receiver for 5 million units.

Equip this and your ship will scan for distress signals. When it finds one, deactivate your pulse drive and you'll find yourself drifting towards an immense, hulking freighter floating lifelessly in the void. These ships make one hell of a first impression, and seeing something that massive just *hanging* there, with no signs of life, is quite haunting.

But this is *No Man's Sky*, and if you see something weird or unknowable, you have to go take a look at it. The sense of wonder and discovery is present here too, but with a dash of dread thrown in. And these derelicts are procedurally generated too. They all have different stories and rewards, and a unique layout inside, which is a nice incentive to keep finding them.

NEED TO KNOW

RELEASE
August 10, 2016

DEVELOPER
Hello Games

PUBLISHER
In-house

LINK
nomanssky.com

FREIGHT NIGHT

The first derelict I find is the MS Ayoshimo XVIII, a long cargo freighter leaning lop-sided in a system with a vivid orange starfield. I spot a small flight deck at the stern and land my ship, and an airlock beckons me inside. It's incredibly atmospheric – and a bit scary.

It's dark inside, so I click my torch on. I access a flickering terminal, which references a 'severe incident' and says the ship is in lockdown. I manually override it and restart the ship's internal gravity, but the heating system is irreparable, meaning the temperature inside is below freezing. The hazards vary, but derelicts are always dangerous places.

Terrifyingly, there's a random chance that derelicts will be infested with aliens. I realise the MS Ayoshimo XVIII is among these when I encounter a bulbous sack hanging from the ceiling with... *something* writhing inside it. When it starts wriggling I have to stand dead still, otherwise it will burst open and spawn a swarm of bitey alien insects.

When you board a derelict you're given a set of mission objectives, including finding the captain's log to determine what happened to the ship and its crew. You'll also find containers to loot and crew logs with evocative snippets of dialogue that reveal clues about the fate of the ship.

There are bigger rewards to find too, in the form of rare items. I scavenged an upgrade for my (functioning, non-spooky) freighter that increased my fleet's trading abilities. And you can sell the captain's log and crew manifest back at the scrap dealer for a pretty penny. Derelicts are confusingly maze-like and stuffed with danger, but the rewards are worth the strife.

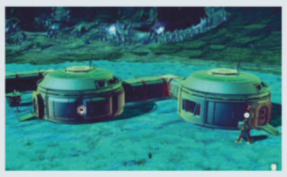
YOU WILL GET LOST WHEN YOU EXPLORE ONE OF THESE SHIPS

You will get lost when you explore one of these ships, but building a mental map, *Resident Evil* style, is part of the fun. And as you move deeper into the ship, you unlock teleporters that let you move around more quickly – and go straight back to the exit once you've found everything of value. It's clear a lot of thought has gone into the design and flow of the derelicts.

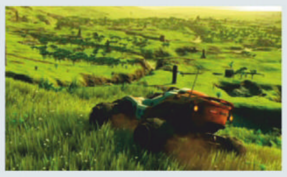
Desolation is a fantastic update, essentially adding a kind of procedural dungeon-crawling to *No Man's Sky*. The derelicts are brilliantly atmospheric, the fragmented stories they tell are compelling, and the rewards are worth the stress. It also adds further texture to the world, mixing tense, intimate horror in with the game's bigger, more dramatic storylines.

With every big, free update, *No Man's Sky* just gets better and better, and I'm delighted developer Hello Games weathered the storm of its troubled launch to make it what it is today. I don't know where they'll take the game next, but I know that whatever it is, it'll be surprising. ■

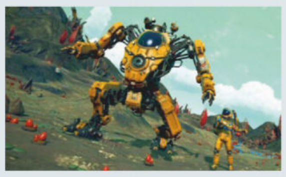
BEYOND THE INFINITE *The best* No Man's Sky *updates so far*



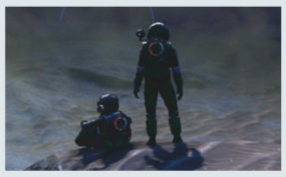
FOUNDATION
This update added modular base building to the game. A strange addition to a game about exploring an infinite cosmos, but people really got into it and made some amazing stuff.



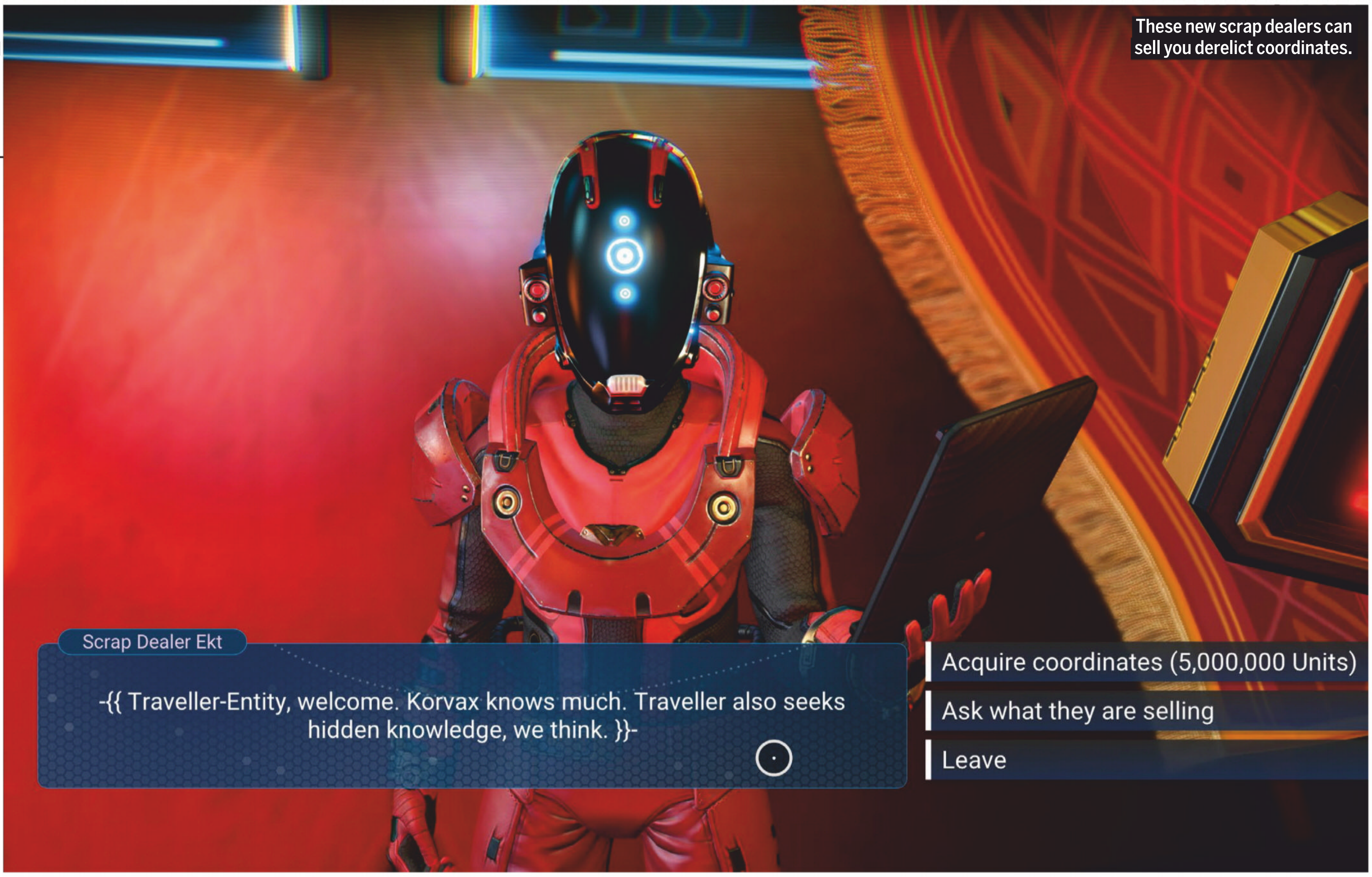
PATH FINDER
Before this update, players were forced to explore planets on foot. But the addition of exocraft in *Path Finder* really spiced things up. I particularly love the bouncy off-road Roamer.



EXO MECH
Not as game-changing as the other updates here, but the introduction of big, stompy robots to *No Man's Sky* is worth celebrating. Great for mining and exploring hazardous worlds.



BEYOND
Although I really prefer playing *No Man's Sky* alone, the *Beyond* update finally added proper multiplayer, allowing four people to team up and explore together – or fight each other.

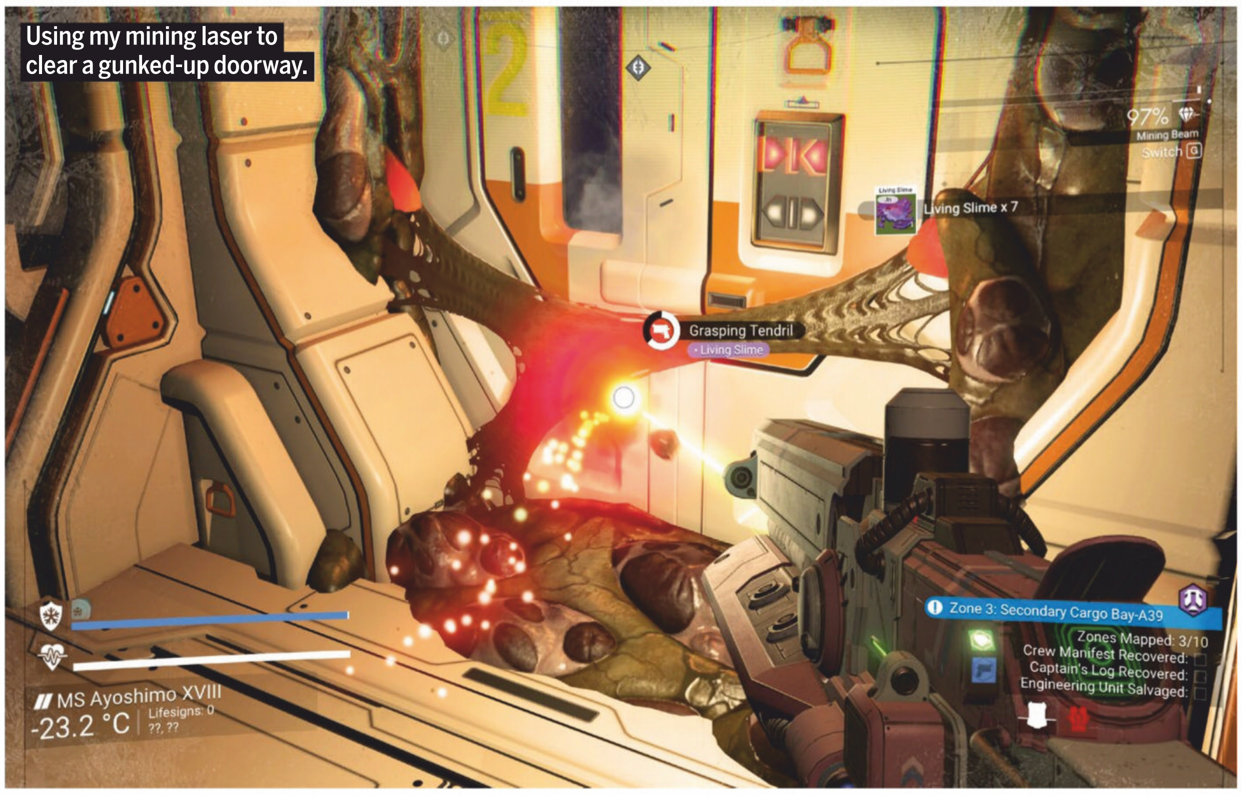


These new scrap dealers can sell you derelict coordinates.

Scrap Dealer Ekt

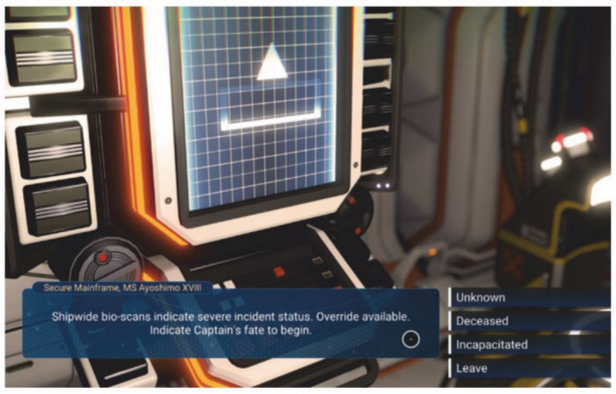
-{{ Traveller-Entity, welcome. Korvax knows much. Traveller also seeks hidden knowledge, we think. }}-

Acquire coordinates (5,000,000 Units)
Ask what they are selling
Leave



Using my mining laser to clear a gunked-up doorway.

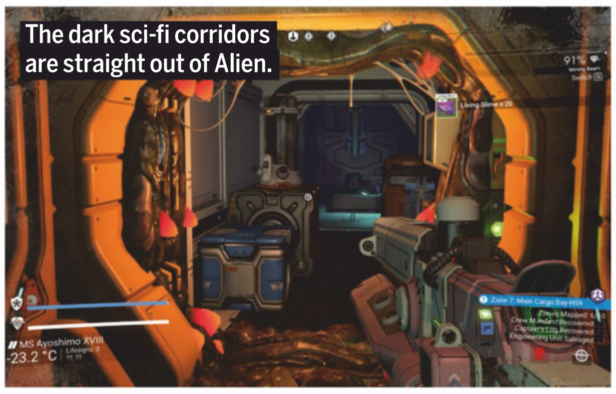
97%
Mining Beam
Switch
Living Slime x 7
Grasping Tendril
Living Slime
Zone 3: Secondary Cargo Bay-A39
Zones Mapped: 3/10
Crew Manifest Recovered:
Captain's Log Recovered:
Engineering Unit Salvaged:
MS Ayoshimo XVIII
-23.2 °C
Lifesigns: 0
??, ??



Secure Mainframe, MS Ayoshimo XVIII

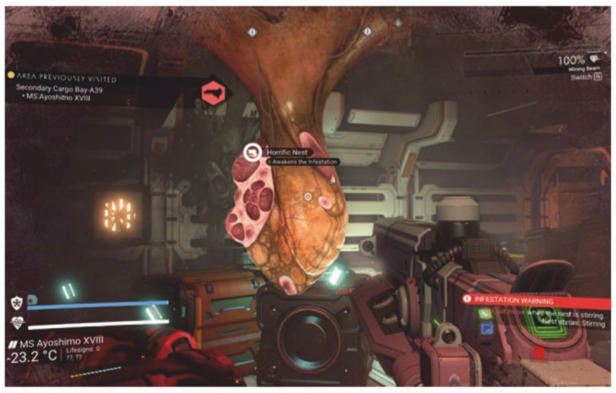
Shipwide bio-scans indicate severe incident status. Override available. Indicate Captain's fate to begin.

Unknown
Deceased
Incapacitated
Leave

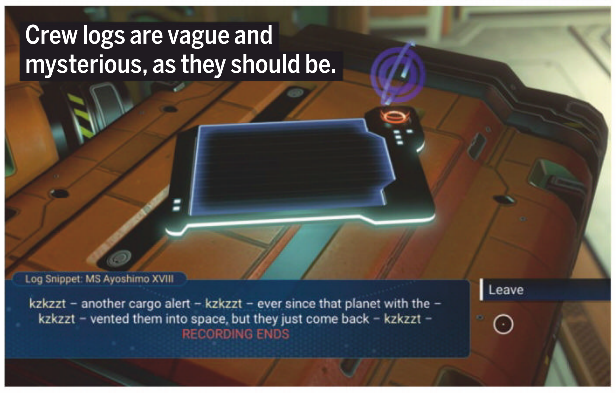


The dark sci-fi corridors are straight out of Alien.

91%
Living Slime x 20
MS Ayoshimo XVIII
-23.2 °C



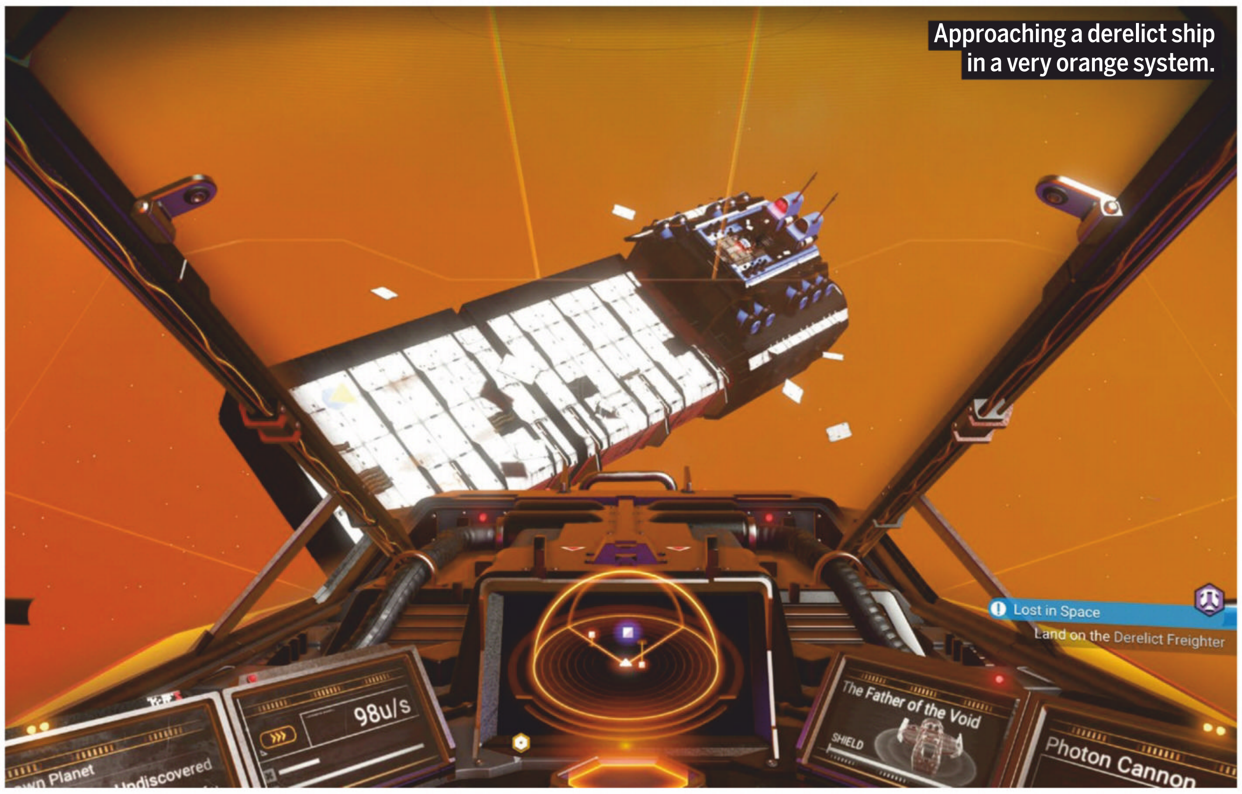
AREA PREVIOUSLY VISITED
Secondary Cargo Bay-A39
MS Ayoshimo XVIII
100%
Mining Beam
Switch
Horrific Nest
Awakens the Infestation
INFESTATION WARNING
Nest status: Stirring
MS Ayoshimo XVIII
-23.2 °C
Lifesigns: 0
??, ??



Crew logs are vague and mysterious, as they should be.

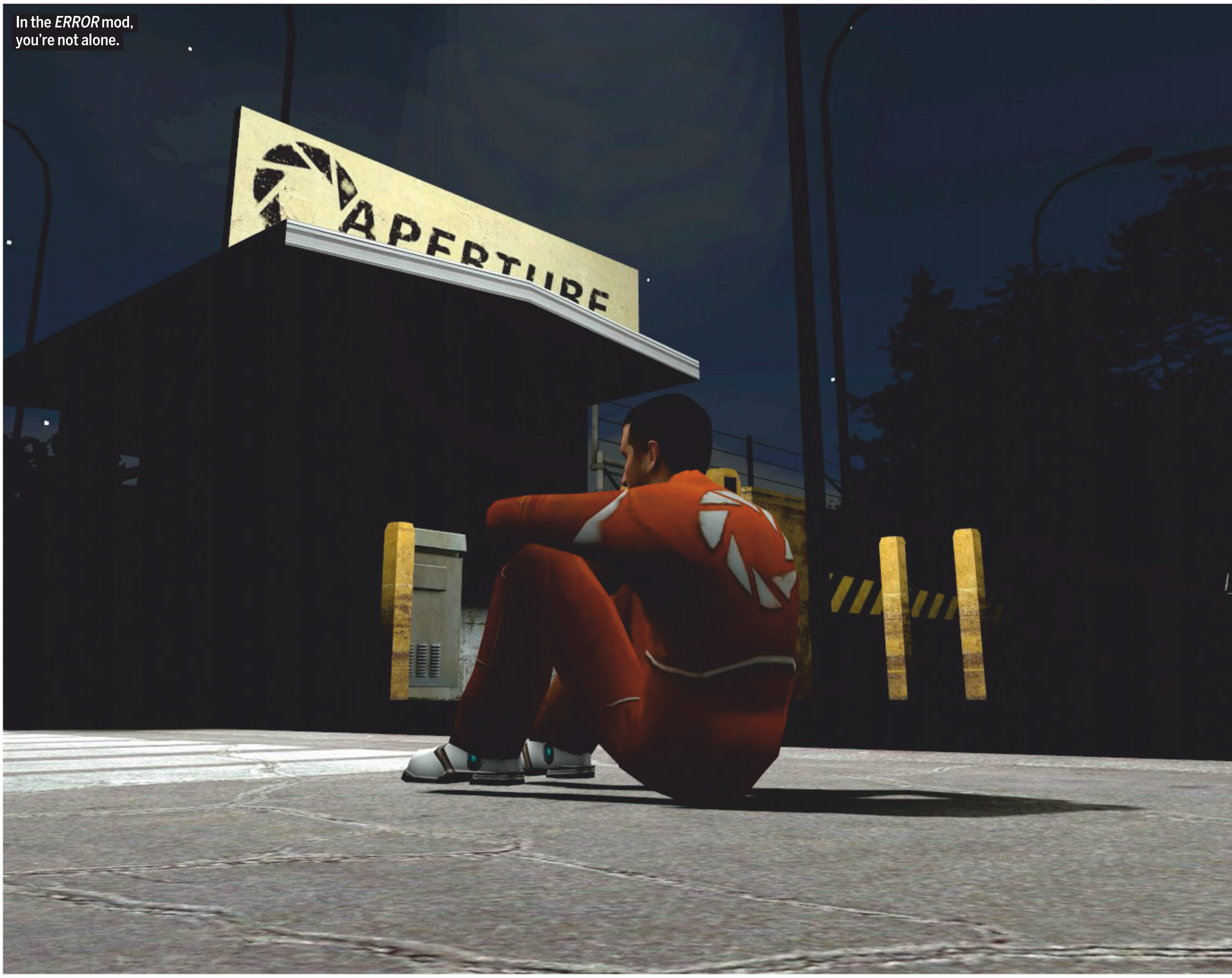
Log Snippet: MS Ayoshimo XVIII

kzkzzt – another cargo alert – kzkzzt – ever since that planet with the – kzkzzt – vented them into space, but they just come back – kzkzzt – RECORDING ENDS

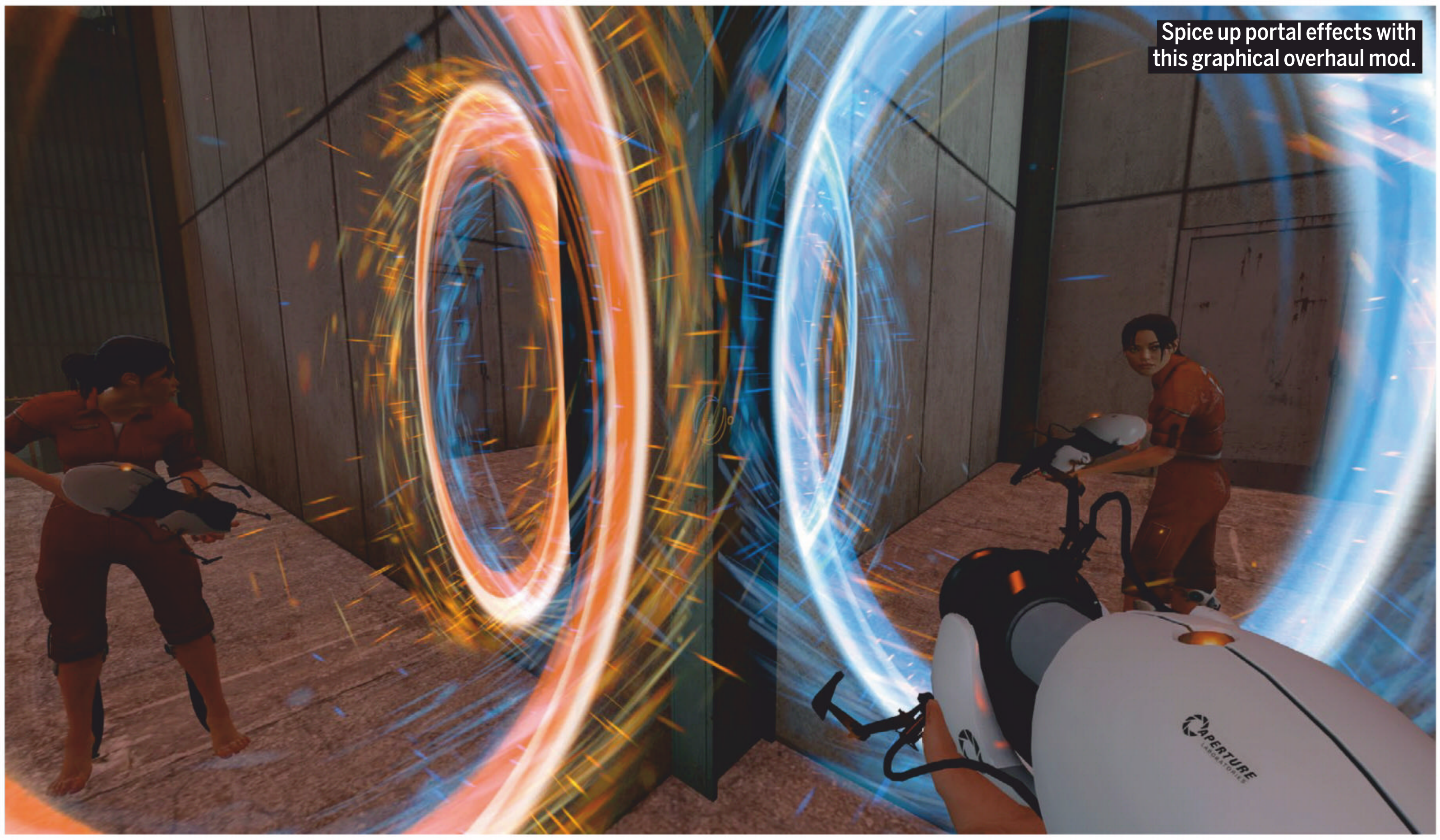


Approaching a derelict ship in a very orange system.

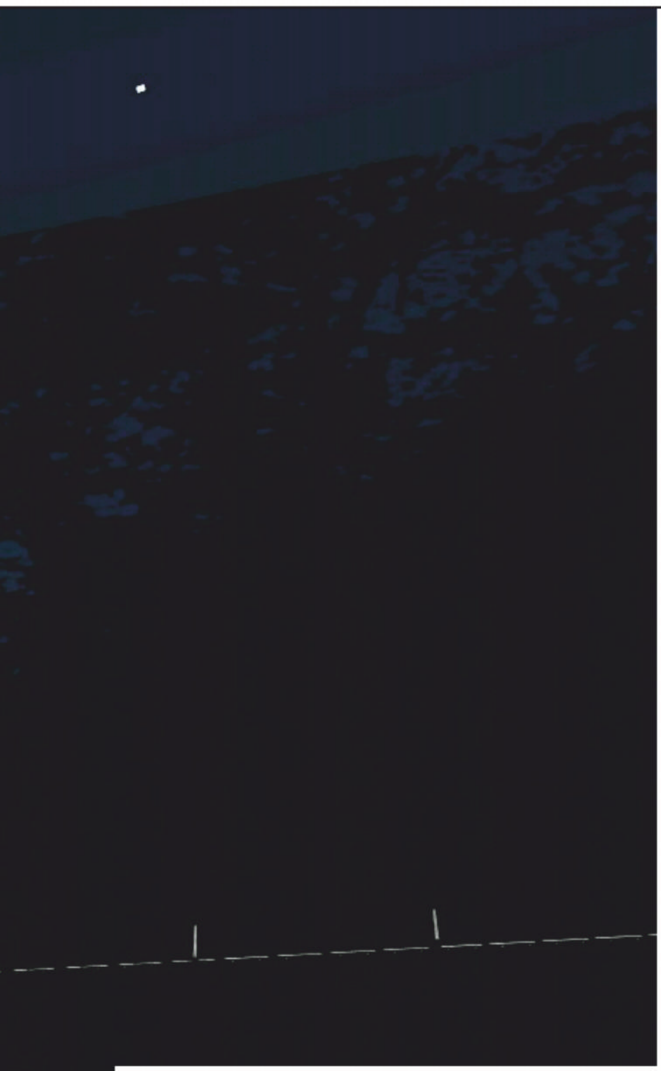
Lost in Space
Land on the Derelict Freighter
98u/s
The Father of the Void
SHIELD
Photon Cannon
Undiscovered
Planet



In the *ERROR* mod, you're not alone.

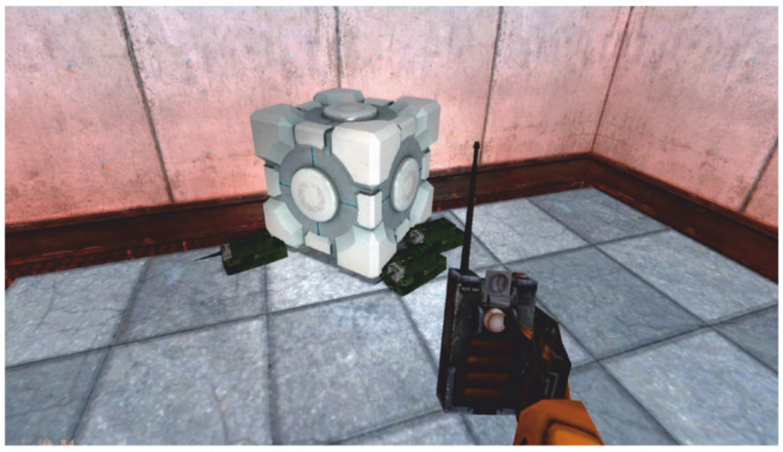


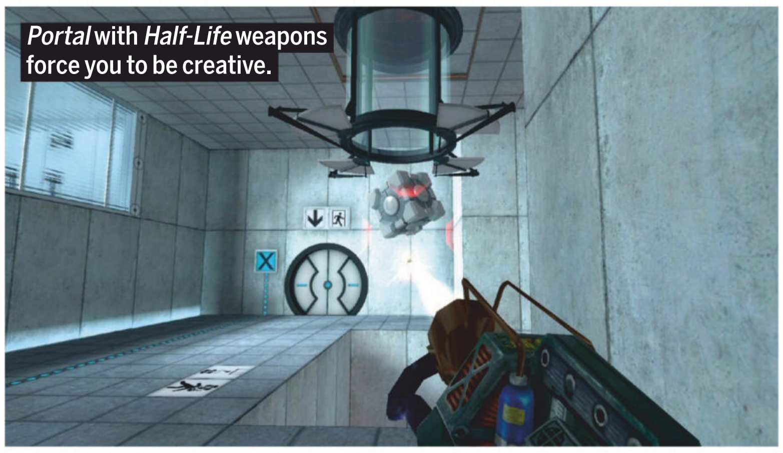
Spice up portal effects with this graphical overhaul mod.



PORTAL

Subtle mods for a new experience. *By Christopher Livingston*





Portal with *Half-Life* weapons force you to be creative.

The original *Portal* is the closest we've ever gotten to a perfect game. It's inventive, hilarious, full of surprises, and has a perfectly balanced learning curve that throws new challenges at you just when you're ready to tackle them. And of course it introduces us to GLaDOS, one of the best videogame villains in history. As a game it's wonderfully short, taking maybe three hours to complete, which means it never has a chance to grow stale and lets you finish it in a single sitting. The first time I completed *Portal*, it left me delighted and hungry for more that I immediately started playing it again from the beginning.

Portal has naturally been overshadowed by *Portal 2*, which has a bigger scope, a greater variety of puzzles and systems, and more characters and lore. It's a fantastic sequel, and honestly *Portal 2* is probably a better game than the original. But *Portal* is still closer to perfect. Somehow, in my brain, those statements make absolute sense.

But just because a game is perfect doesn't mean it shouldn't be modded. Mods don't need to make a game better, they just need to change some aspect of the experience of playing it in an interesting way. After playing *Half-Life: Alyx* in VR this year, I realised I was hungry for more Valve FPS action, so I went back to the original *Portal* to play it again. But this time, I brought some mods along, and interestingly, all of these mods leave the test chambers of *Portal* intact. No new puzzles, no new chambers. It's the same *Portal*, but they still manage to change the game enough to make it feel like a completely fresh experience.

TECHNICAL ISSUES

ERROR is up first. It's a mod that turns *Portal* from a comedy adventure into a disturbing psychological horror. The test chambers, and the Aperture facility itself, have the same layout and puzzles, so if you've played *Portal* a few times it'll all feel perfectly familiar. But in *ERROR*, something is definitely off. Rather than GLaDOS waking you up with her famous comedic insults and instructions, you're greeted with... nothing. Silence. You're in the first test chamber, but it's quiet and dark, as if everyone in the facility has gone home for the day.

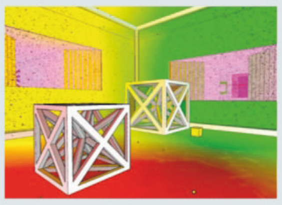
JUST BECAUSE A GAME IS PERFECT DOESN'T MEAN IT SHOULDN'T BE MODDED

As you progress through the chambers, things slowly get weirder and more unsettling. Sometimes you come across disturbing notes scrawled on the wall. The security cameras look different, darker, more ominous as they turn to follow your actions. Even the cheery companion

PERSPECTIVES *Other brainy first-person puzzle games you'll love*

SUPERLIMINAL
Puzzler where an object's size depends on your perspective.

THE WITNESS
An island not just filled with puzzles, but made from them.



ANTICHAMBER
It's like running around inside a painting by artist M C Escher.

OUTER WILDS
Explore a solar system full of puzzles in this beautiful time-loop game.

cubes seem grim and dull. The lights go out at times, the test chamber placards malfunction, and at times electricity seems to hum louder for a few seconds. It feels like the facility has been abandoned and is only barely flickering with power. It's strange how uncomfortable and off-putting it is to play *Portal* without a chatty evil AI watching you and making snarky comments.

In one test chamber, rather than a single camera watching you, there are suddenly a dozen or more, lined up and peering at you like curious spectators. Sometimes you can faintly hear GLaDOS, just saying a single word drawn out for several seconds as if she's still alive but on the verge of shutdown. At times I'll be solving a puzzle and everything will go black, and I'll awaken in a completely different room or hallway, lights blinking, given a glimpse of a single chair, usually unoccupied... though at one point I caught a brief flash of someone sitting in it.

In another chamber, which is filled with smoke or fog making it hard to see, I'm almost all the way through solving the puzzle before I notice something in the corner – a dark shape on the floor. It's a dead body that I hadn't spotted through the mist while I was running around placing portals. More bodies show up deeper into *ERROR*, and they don't seem to be test subjects, but employees. Is this taking place before the events of *Portal*, or long after? Did GLaDOS kill them, or was it something else? It's unclear.

Even the modder, M_K_L, who wrote a series of blog posts on the mod's page on ModDB.com, insists this *ERROR* isn't a mod but a corrupted version of *Portal* he managed to download. He also relates a series of mysterious messages sent to him from a shadowy group called Dead Devs, warning him not to release it. He later surmises that *ERROR* takes place in an alternate universe where GLaDOS is even more evil than she is in the original *Portal*. M_K_L's posts are a nice bit of worldbuilding for this dark version of *Portal*.

ERROR is spooky, unsettling and an extremely fun way to play through the original *Portal* again. Don't worry too much about jump scares – there are a few but mostly it relies on atmosphere, audio cues and other mood-enhancing alterations to turn the fun first-person puzzler into a growing, dreadful horror.

PORTAL MINUS PORTALS

But if horror isn't your thing, and if you're looking not just for a change in mood but in challenge, a mod called *Portal Done Half-Life Source* (*PDHLS*) might be for you. Or, it might not – it's blisteringly difficult, mainly because you have to make your way through the original *Portal* without a portal gun. Instead, you're armed with all the weapons from *Half-Life*. In fact, *Portal* is actually a mod for *Half-Life: Source*, though you'll still need to own *Portal* to play it since it uses *Portal*'s maps.

A MOD CALLED PORTAL TINY CHELL MAKES HER ABOUT SIX INCHES TALL. AND ONLY HER!

Again, the original levels of *Portal* are all intact and unchanged, *PDHLS* is just a way to tackle them in a new way. How do you beat *Portal* without a portal gun? A few tricks are pretty evident – if you need to move a companion cube onto a button, for example, you can nudge it with your body or shoot it with one of your weapons. But *Portal* isn't just about moving objects, it's about moving yourself with the aid of portals, so you'll need to be familiar with the quirks of the Source Engine, tricks like using a Snark stuck in a wall as a foothold to climb up, or launching yourself over a gap using a well-placed satchel charge. Get ready to quicksave a lot – I blew myself up and fell into pits constantly.

Even the smallest challenges of *Portal* take on a new angle when you're lacking a portal gun. One level drops a companion cube into a pit when you walk over toward it, and I watched it happen a dozen times before I finally figured out how to prevent it. By charging my gauss gun I could blast the cube before it fell into the pit (though hitting it took me another dozen or so tries). Then I had to shoot the cube all the way over to the button I needed to place it on. Sorry, cube! It's nothing personal.

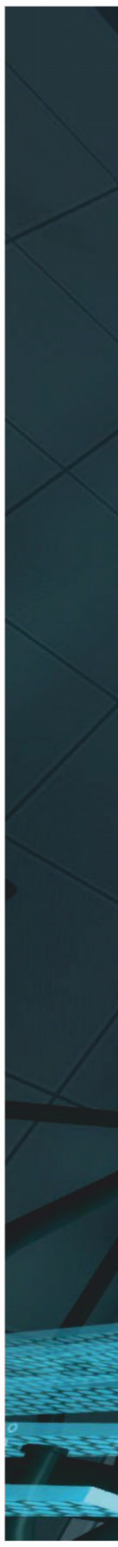
PDHLS is extremely difficult, but thankfully there's a video on the mod's page at ModDB.com to give you a few ideas on how to tackle these challenges. And it's an extremely cool experiment because you can, with a lot of trial and error and some creative thinking, beat *Portal* without ever using a portal.

Or how about a mod that doesn't change *Portal* at all... but makes a significant change to our hero, Chell. A mod called *Portal Tiny Chell* makes her about six inches tall. And only her! Even your portal gun is still normal size, but now you're scurrying around the familiar test chambers no bigger than a cat.

It's definitely a new way to experience the challenges of *Portal*, when the companion cubes are now twice your height and the turrets are tall enough to be looking down on you. There are a few bugs and glitches, but it's still an amusing way to play *Portal* with a new perspective.

If the mods above are a bit too extreme when it comes to changes, there's still a way to make some minor but effective visual ones. *Portal* still looks great, which isn't all that surprising since there's not a lot to it, graphically: most of the scenery consists of white walls and floors, there aren't a whole lot in the way of effects, and with the exception of an occasional glimpse of Chell through a *Portal*, there aren't any human characters to look at. *Portal* is a pretty minimalist game, but you can still freshen it up with a mod.

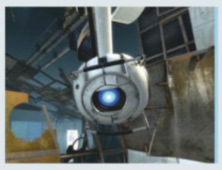
The *Portal Update 2019* mod is a bit of a remaster, bringing the looks of the game closer to *Portal 2*. The textures are sharper, cleaner and brighter, and there some beautifully improved effects – the portals are downright gorgeous. Even the portal gun in your hands looks much shinier and sleeker. If you want to play through *Portal* again with a fresher, cleaner look but no other changes, this mod fits the bill. ■



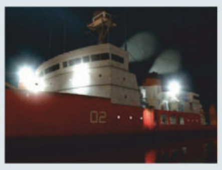
THREEPEAT *What we'd want from* Portal 3 *(if we ever get it)*

REMEMBER!
DON'T LISTEN.

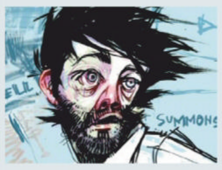
TIME TRAVEL PORTALS
They were teased in *Portal 2*. Let's have them then!



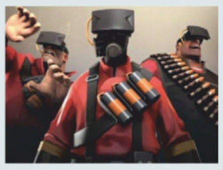
WHEATLEY TO RETURN
I'm sure he's happy in spaaaace. But we miss him.



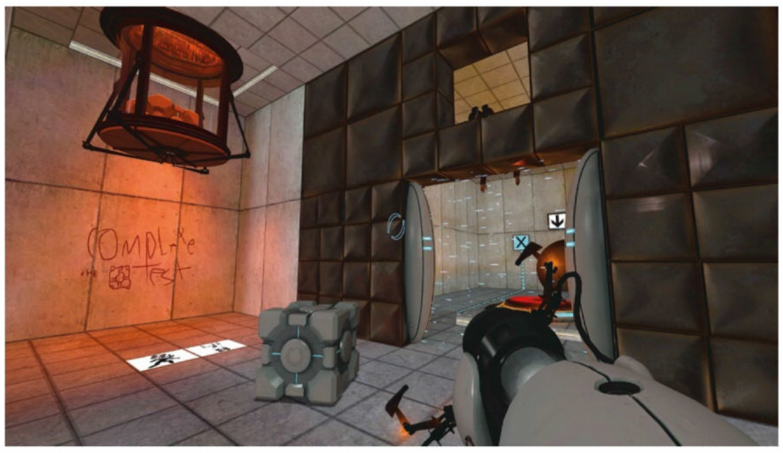
THE BOREALIS
Since the *Half-Life* series stubbornly refuses to take us there, *Portal 3* could.

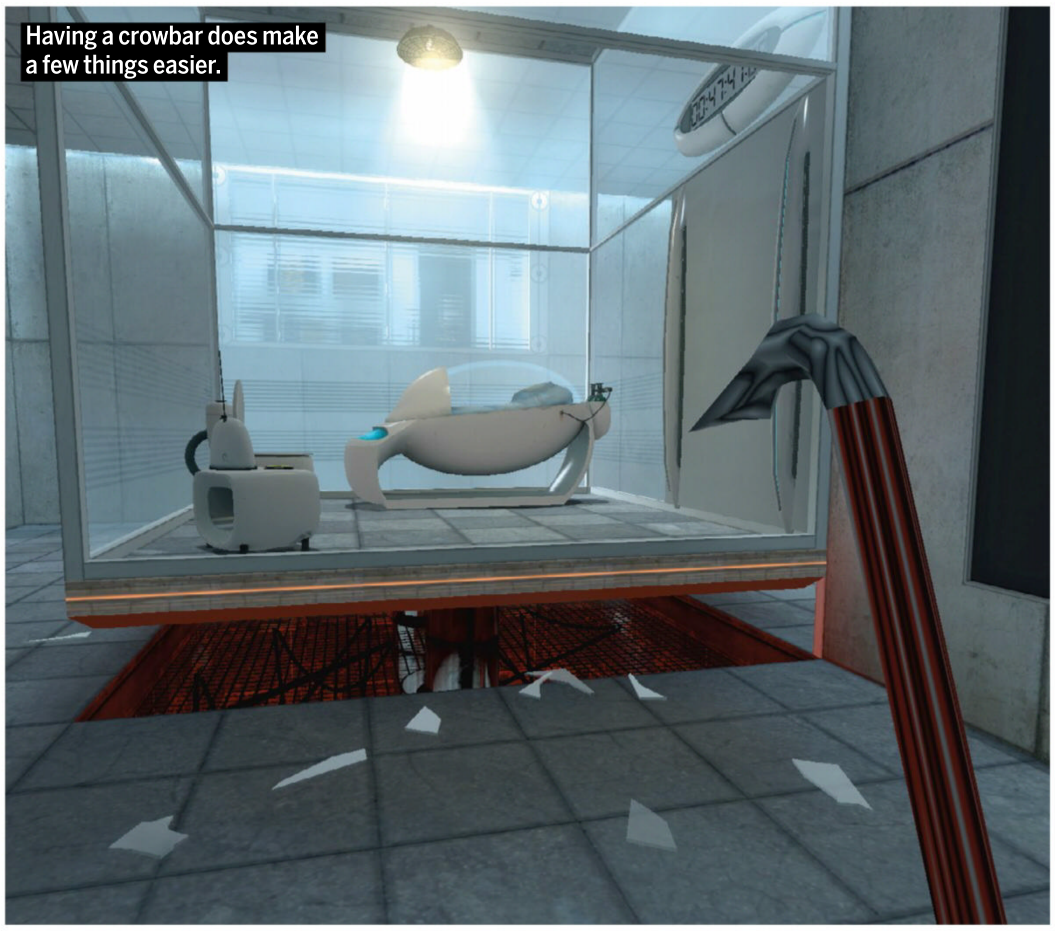


DOUG
We don't need to meet Ratmann, but we'd love to learn more about him.

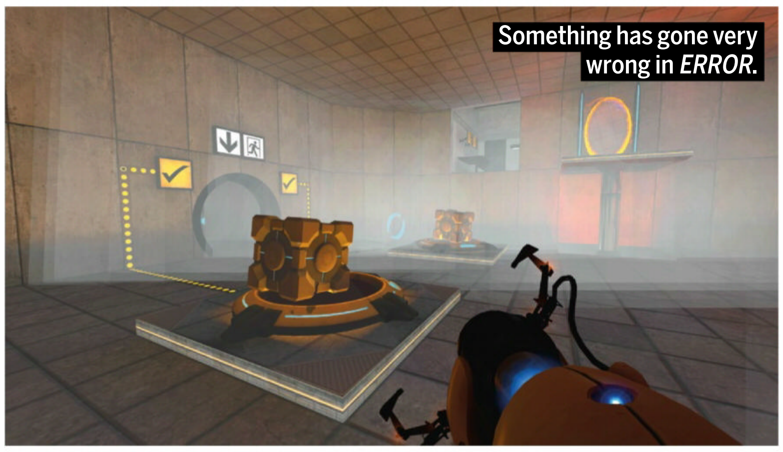


NO VR
We'd prefer not to vomit while flying through portals, please and thanks.

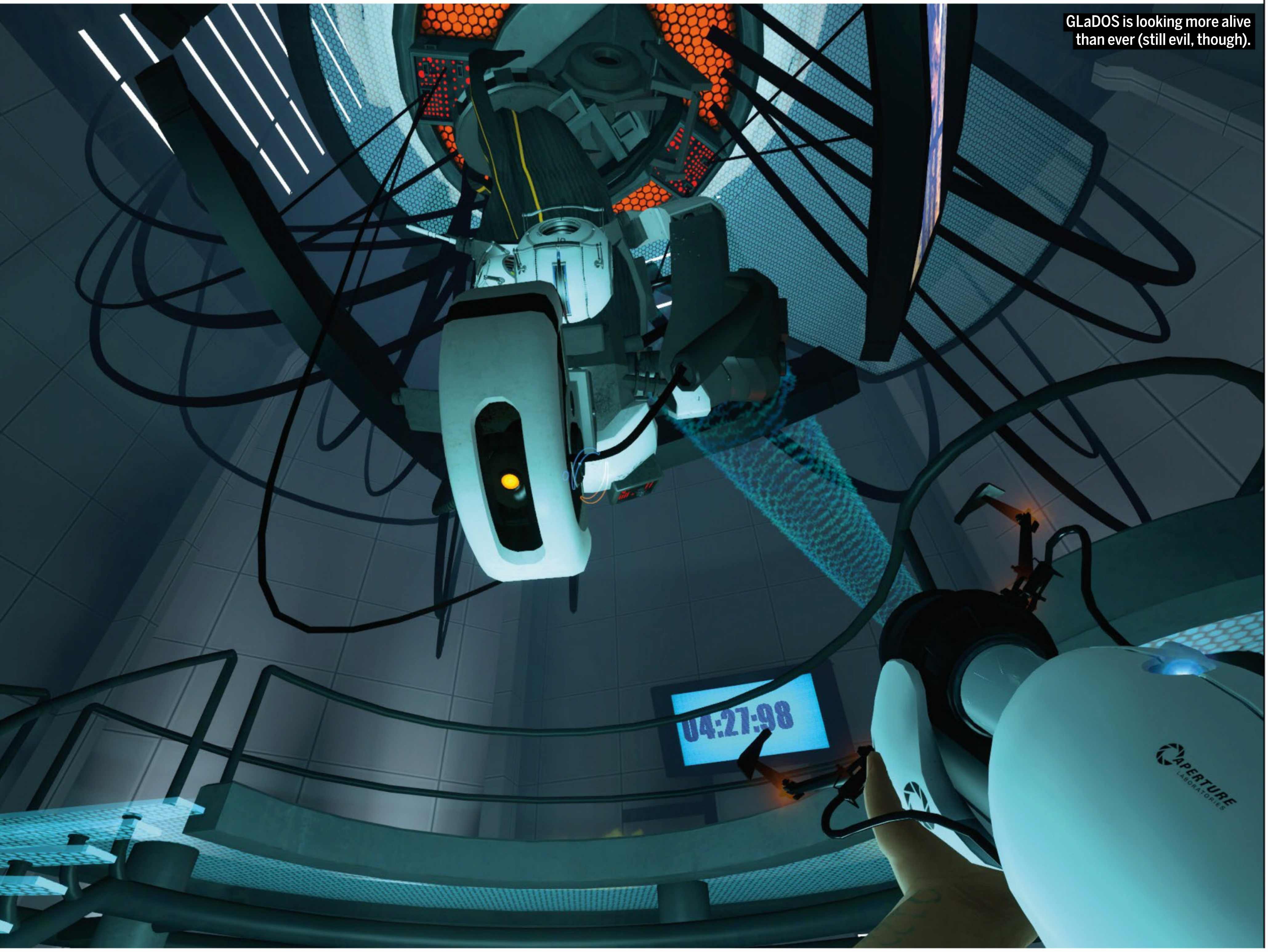

Complete Test



Having a crowbar does make a few things easier.



Something has gone very wrong in *ERROR*.



GLaDOS is looking more alive than ever (still evil, though).

04:27:98
APERTURE LABORATORIES

MASTER HORIZON: ZERO DAWN'S MACHINES

Let no robot dinosaurs stand in your way with our tips and tricks. *By Harry Shepherd*

NEED TO KNOW

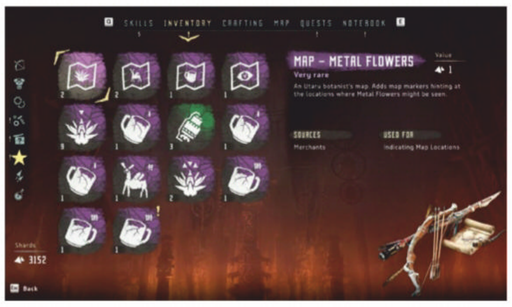
DIFFICULTY
Easy

TIME
10 Hours

VITAL LINKS
Power Cells locations:
bit.ly/3l7GOKI
Weapons list:
bit.ly/3l88BQ7
Performance review:
bit.ly/3hi4tL5

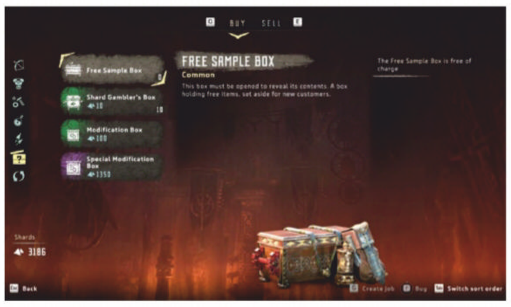
BY THE CAMPFIRE

1 Aloy's world is huge, so you'll want to fast travel eventually. Craft Fast Travel Packs and visit as many campfires as possible to do that, then save up for the Golden Fast Travel Pack to zip around as many times as you want for no extra cost.


MAP - METAL FLOWERS

COLLECTOR'S ITEMS

2 Buy collectable maps from merchants whenever you can. Not only will they give you a searchable area for each rare trinket on your map, but enthusiasts at major hub areas will give you special rewards in return for full collections.


FREE SAMPLE BOX

FREE STUFF!

3 But before you head out collectable-hunting, pick up your free Treasure Box from every new merchant you meet. So long as you haven't snagged one from them before, find the 'Treasure Boxes' tab in their menu to swipe your resources, gratis.

COLOUR ME SURPRISED

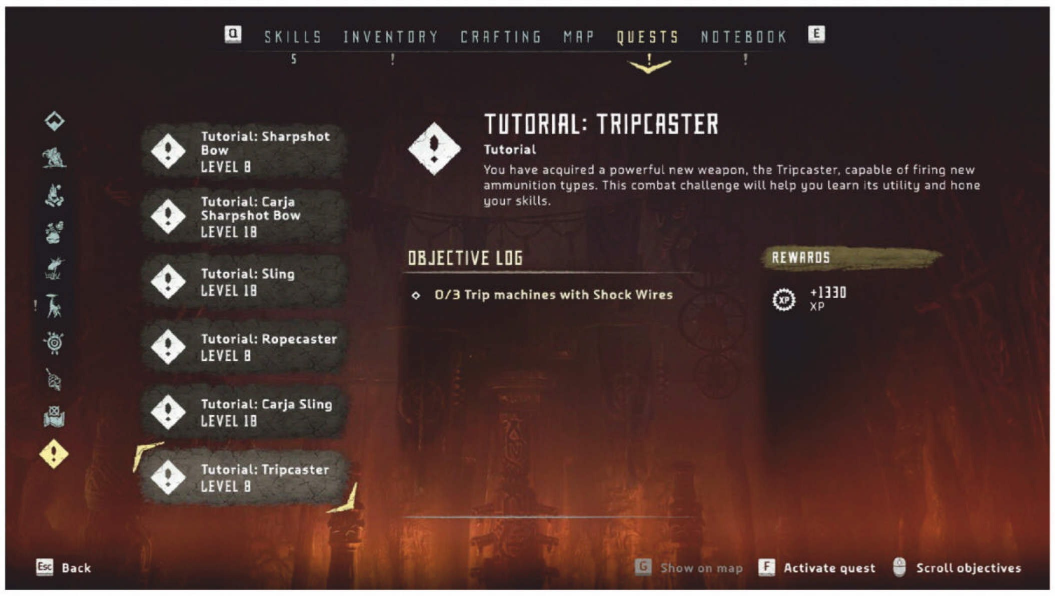
4 When you've successfully hunted an animal or machine, you can see at a distance the rarity of its drops. A marker will appear from the body with the following colours in ascending order of rarity: white, green, blue, and purple.

RIDING HIGH

5 Always be on the lookout for Tallnecks. Their icon will appear on the map when you're nearby, but you'll likely see and hear them first. Overriding these robots will clear the fog of war on your map for miles.

TOYS ARE OURS

6 Each time you pick up a new weapon you get a related tutorial quest. Just make sure that, if you're pursuing these objectives, you have the mission activated, otherwise it won't count.


Q
SKILLS
5
INVENTORY
!
CRAFTING
MAP
QUESTS
!
NOTEBOOK
!
E
Tutorial: Sharpshot Bow
LEVEL 8
Tutorial: Carja Sharpshot Bow
LEVEL 18
Tutorial: Sling
LEVEL 18
Tutorial: Ropecaster
LEVEL 8
Tutorial: Carja Sling
LEVEL 18
Tutorial: Tripcaster
LEVEL 8
OBJECTIVE LOG
REWARDS
+1330
XP
Esc Back
G Show on map
F Activate quest
Scroll objectives

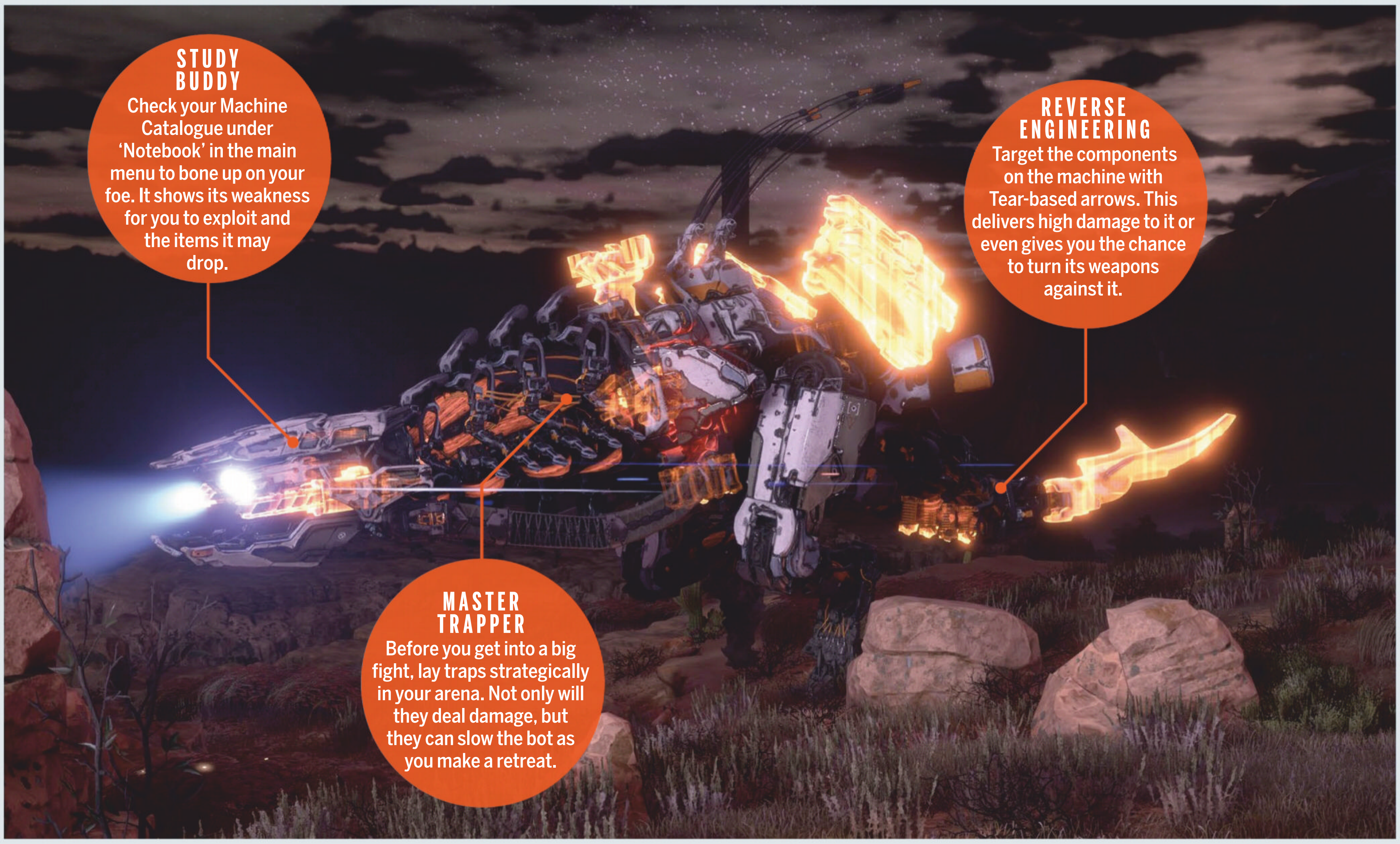
TUTORIAL: TRIPCASTER
Tutorial
You have acquired a powerful new weapon, the Tripcaster, capable of firing new ammunition types. This combat challenge will help you learn its utility and hone your skills.

0/3 Trip machines with Shock Wires

SHIELD WEAVE

7 For a special OP treat, collect hidden Power Cells in Ancient Ruins, All-Mother Mountain, Maker's End, Grave-Hoard, and GAIA Prime. Trigger the special quest by heading to the mysterious Ancient Armory in the Embrace.

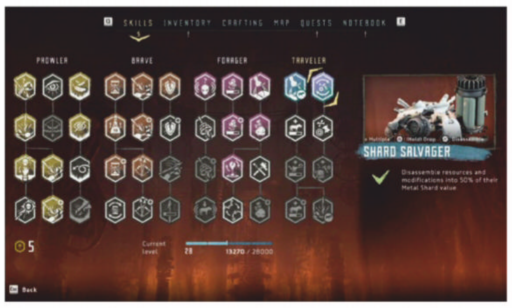
JAW DROPPING *Obliterate boss bots, like the gargantuan Thunderjaw*



STUDY BUDDY Check your Machine Catalogue under 'Notebook' in the main menu to bone up on your foe. It shows its weakness for you to exploit and the items it may drop.

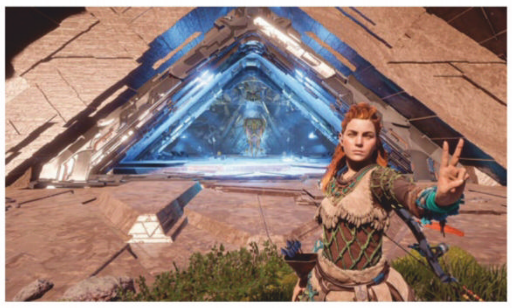
REVERSE ENGINEERING Target the components on the machine with Tear-based arrows. This delivers high damage to it or even gives you the chance to turn its weapons against it.

MASTER TRAPPER Before you get into a big fight, lay traps strategically in your arena. Not only will they deal damage, but they can slow the bot as you make a retreat.


SKILLS INVENTORY CRAFTING MAP QUESTS NOTEBOOK
PROWLER
BRAVE
FORAGER
TRAVELER
SHARD SALVAGER

STAY FOCUSED

8 With enough side tasks completed, you'll have plenty of skill points to unlock all abilities. That said, along with Silent Strike for stealth kills, get Concentration early – bullet time will help you shoot tricky weak spots.



TOIL AND TROUBLE

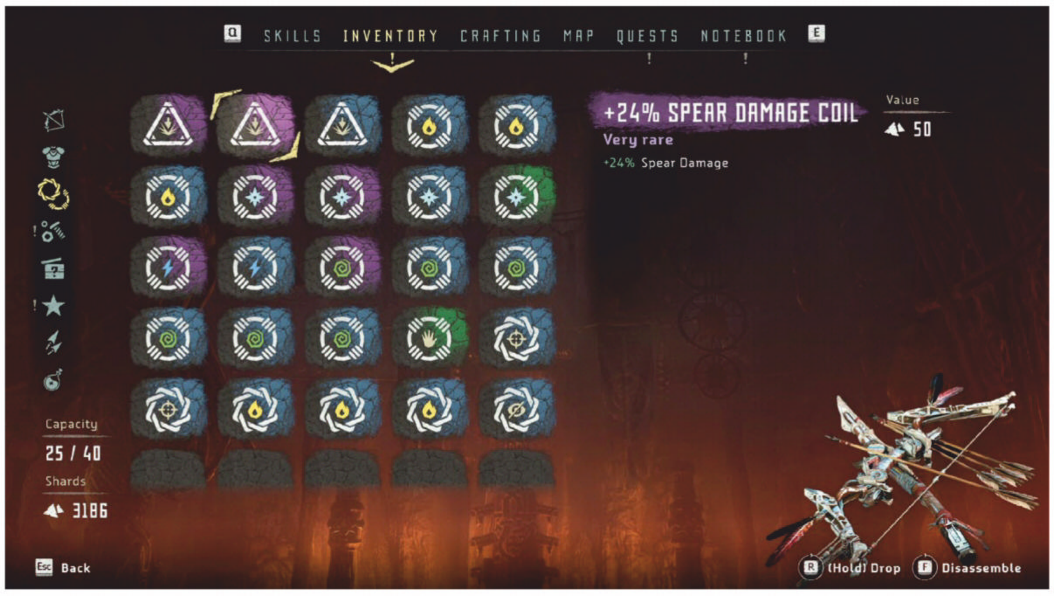
9 Keep your eyes peeled for Cauldrons, special dungeons which are marked by a blue triangle shape on your map. Complete these extended challenges to earn powerful new upgrades that'll help you tame increasingly powerful bots.

HUNTING GROUNDS

10 If you're struggling to get the perfect rank in an especially tough Hunting Grounds timed quest, speak to the relevant Keeper for hints and take a look at the inventory of your nearest merchant, who'll be selling just the items you need.

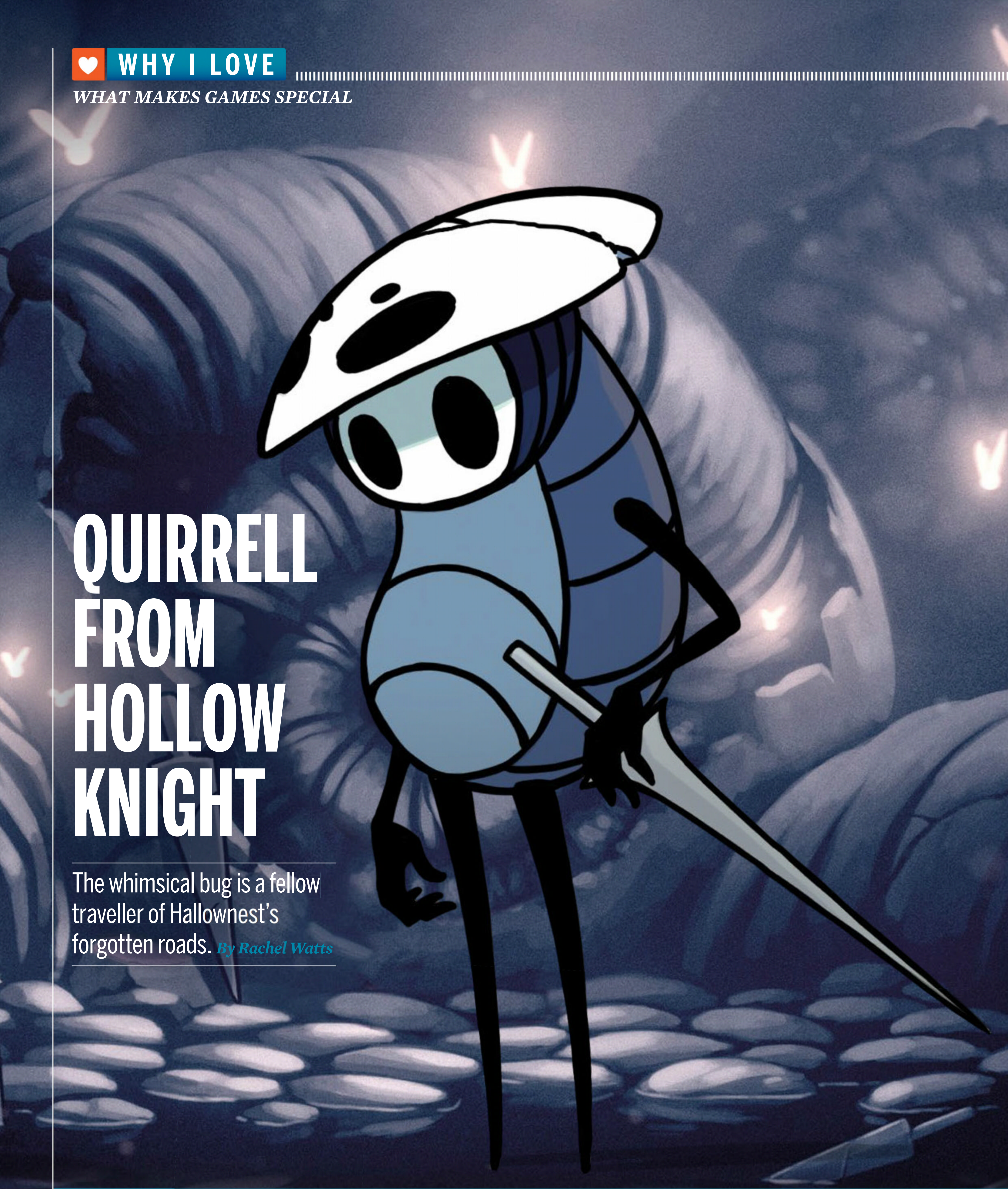
FOR THE HOARD!

11 Early on, hunt regular animals often and hoover up everything you find. Crafting is especially crucial in the beginning stages as you'll often max the limits of your various ammo pouches. Check your crafting menu to find the resources you need.


SKILLS INVENTORY CRAFTING MAP QUESTS NOTEBOOK
+24% SPEAR DAMAGE COIL
Very rare
+24% Spear Damage
Value
50
Capacity
25 / 40
Shards
3186
Back
(Hold) Drop
Disassemble

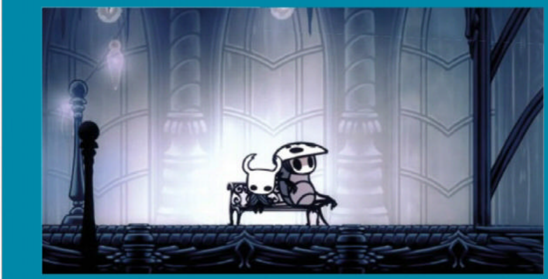
CUSTOM SHOP

12 With modifications you can optimise your weapons and armour, with the rarer ones offering more potent, boons. You'll find new ones often as you go, so there's no need to hold on to more common ones.

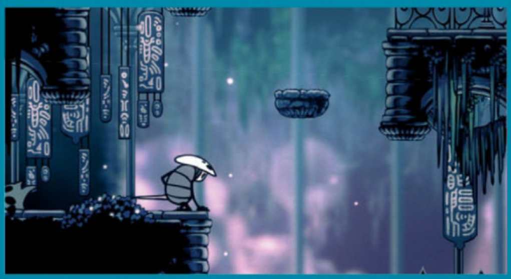


QUIRRELL FROM HOLLOW KNIGHT

The whimsical bug is a fellow traveller of Hallownest's forgotten roads. *By Rachel Watts*



LEFT: The perfect spot for a snooze



The labyrinth that lies beneath the small bug town of Dirtmouth is a dangerous place. Exploring the ruins of *Hollow Knight*'s vast kingdom is an isolating experience, and running into the creatures living in these wastelands will almost always end in confrontation.

Although the scale of these sprawling caverns is unnerving, exploration and discovery are the two main pillars of *Hollow Knight*. You have to embrace the feeling of getting a little lost and letting curiosity lead the way – even if it gets the better of you. Thankfully, you're not alone in this pursuit. Throughout your journey you bump into another traveller on their own quest – Quirrel.

He embodies the game's sense of discovery wholeheartedly. His curiosity for the mysteries of Hallownest pulls him deeper into the kingdom for reasons he cannot explain. He's a bit of a mysterious character, describing himself as more of an observer than a warrior, although he does carry a nail around for safety. Like many other characters in the undergrowth, he's lost his memory and is hoping to recover it by wandering the wastes of Hallownest. Although his fate is a bit uncertain, Quirrel is an upbeat bug and always fascinated by the world around him. He's also the closest thing you have to a friend down in the dark pits of Hallownest.

You meet Quirrel a few times over the course of the game, usually finding him in the rare peaceful pockets of the underground. Running into him normally means a moment of rest, and the game often invites you to share it with him, sitting next to him on a bench or quietly gazing at whatever he's looking at. If you strike up a conversation, he's always open about what he's musing over.

Being a fellow explorer, Quirrel has a genuine interest in Hallownest and wants to understand its myths and history, and Team Cherry's gorgeously gloomy subterranean world is stuffed to the brim with lore. The detail that has gone into building the fallen bug civilization is comprehensive, but also completely sealed away within the broken memories and hazy dreams of the characters. With *Hollow Knight*'s story being notoriously difficult to piece together, it's nice sharing this path with a fellow traveller. His musings are often posed as questions, like whether something can be opened, or questioning the importance of a place. When he asks these questions, I find myself wanting to know the answers. The most poignant example of this is when you meet him in the City of Tears.

QUIRREL IS AN UPBEAT BUG AND ALWAYS FASCINATED BY THE WORLD AROUND HIM

WANDER-FUL

This area is a beautiful metropolis deep within Hallownest, where it always rains. Its lore describes it as once the beating heart of the kingdom, but now its mechanical elevators, endless libraries, and intricate tram systems lie abandoned. You find Quirrel sitting on a bench looking out a window over the city, and you can take a seat next to him. It's one of the most serene moments of the game as the music quietens down to highlight the light pitter-patter of the rain.

Joining him on the bench, he muses about the endless rain that encompasses the city, and wonders where the water comes from – since Hallownest is so deep underground. It's an interesting point, I'd been running around the City of Tears for a while and just accepted the rain as a weird anomaly, but maybe there was a reason. "Before I leave this Kingdom, I'd like to see where all that water comes from," he says. "What a sight it must be!"

Quirrel's observations inspire you to act, and that is what makes him the perfect companion. Many wanderers are looking for something – be it freedom, peace, to lose themselves, or to find something. For Quirrel and the player, our search for answers is what unites us.

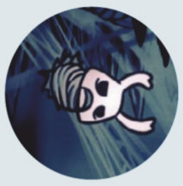
Untangling the web of locations and lore in *Hollow Knight* is no easy task, but Quirrel is a character who inspires you to look deeper. Crossing paths with him was always a welcome encounter, his curiosity and wisdom always inspiring me to push on. Without him, I would never have found some of Hallownest's deeper secrets, like the real source of that endless rain. He really captures the whimsical nature of a true wanderer – one pursues their curiousity, but also nurtures it in others. ■

A BUG'S LIFE *Hallownest's other wandering characters*

CORNIFER
A friendly cartographer who wants to map all of Hallownest.

HORNET
A protector of the ruins, and star of the upcoming sequel.

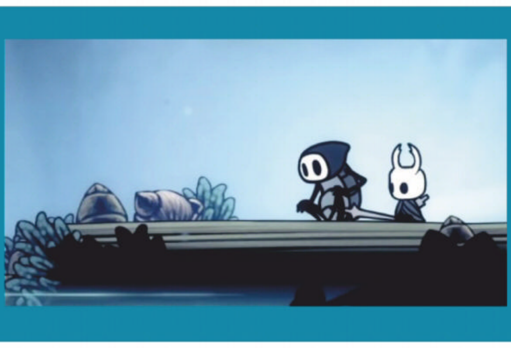
CLOTH
She has a big heart, but her courage could do with some work.



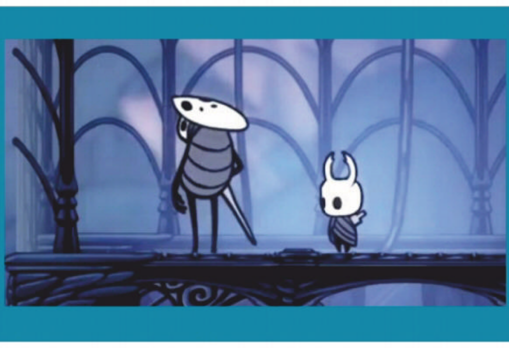
ZOTE THE MIGHTY
The 'Knight of the People.' (A title he gave himself.)

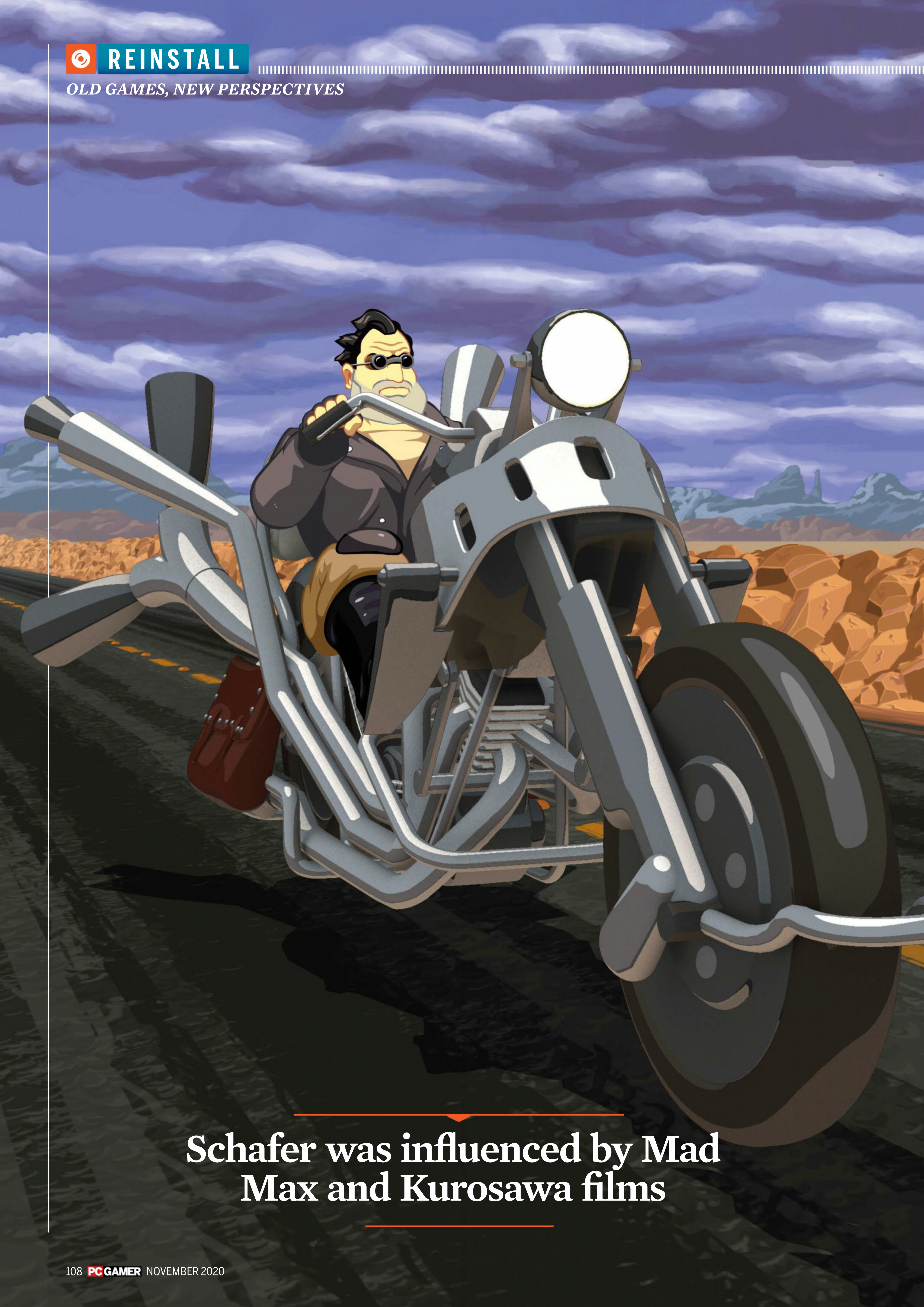
NEED TO KNOW

RELEASED February 24, 2017	**EXPECT TO PAY** £11
OUR REVIEW 92%	**LINK** hollowknight.com

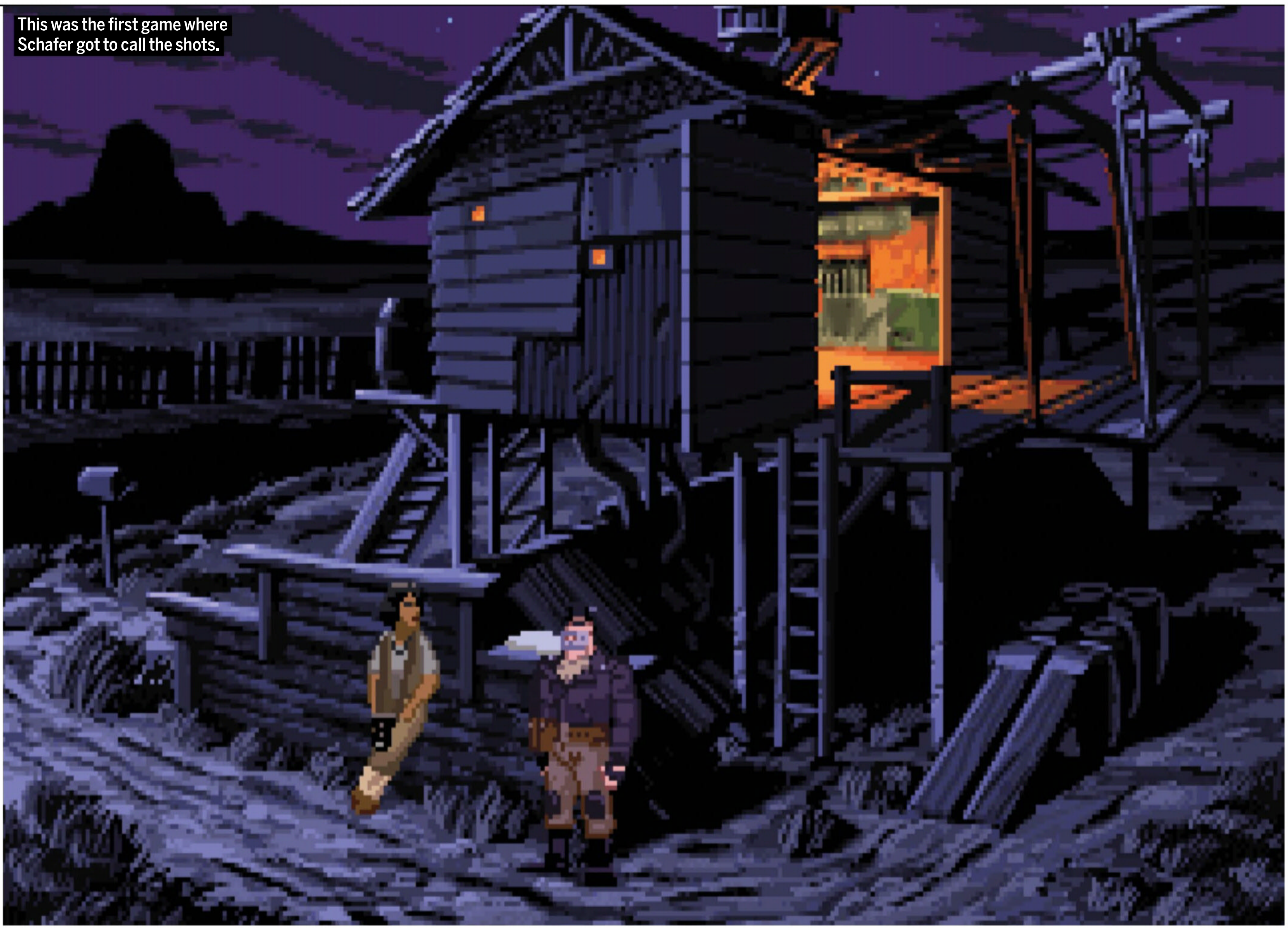


RIGHT: So, what are you thinking about?





Schafer was influenced by Mad Max and Kurosawa films



This was the first game where Schafer got to call the shots.

FULL THROTTLE

LucasArts' biker adventure still kicks ass. *By Andy Kelly*

To me *Full Throttle* isn't so much a point-and-click adventure as a point-and-*kick* adventure. While many adventure game protagonists are usually bumbling, unlikely heroes who make up for their physical shortcomings by relying on their wits to solve problems in their world, square-jawed biker Ben is more comfortable using his fists and feet. More than one puzzle in the game is solved by kicking something, and this refreshingly no-nonsense approach is what sets *Full Throttle* apart from other classic LucasArts adventures. I mean, why solve a series of increasingly absurd puzzles to unlock a door when you can just boot it off its hinges?

Released in 1995, *Full Throttle* was written and designed by Tim Schafer, whose name has become synonymous with LucasArts adventure games, from *Monkey Island* to *Grim Fandango*. Schafer was influenced by Mad Max and Kurosawa films; particularly the idea of a stoic, tough guy hero who's never looking for trouble, but finds it anyway. Visually, lead artist Peter Chan took inspiration from Mike Mignola's Hellboy comics, which is evident in his use of heavy shadows and silhouettes. LucasArts greenlit *Full Throttle* on Schafer's assurance that it would be a commercial hit, and he was right. LucasArts adventures usually sold about 100,000 copies, but a million people bought *Full Throttle*.

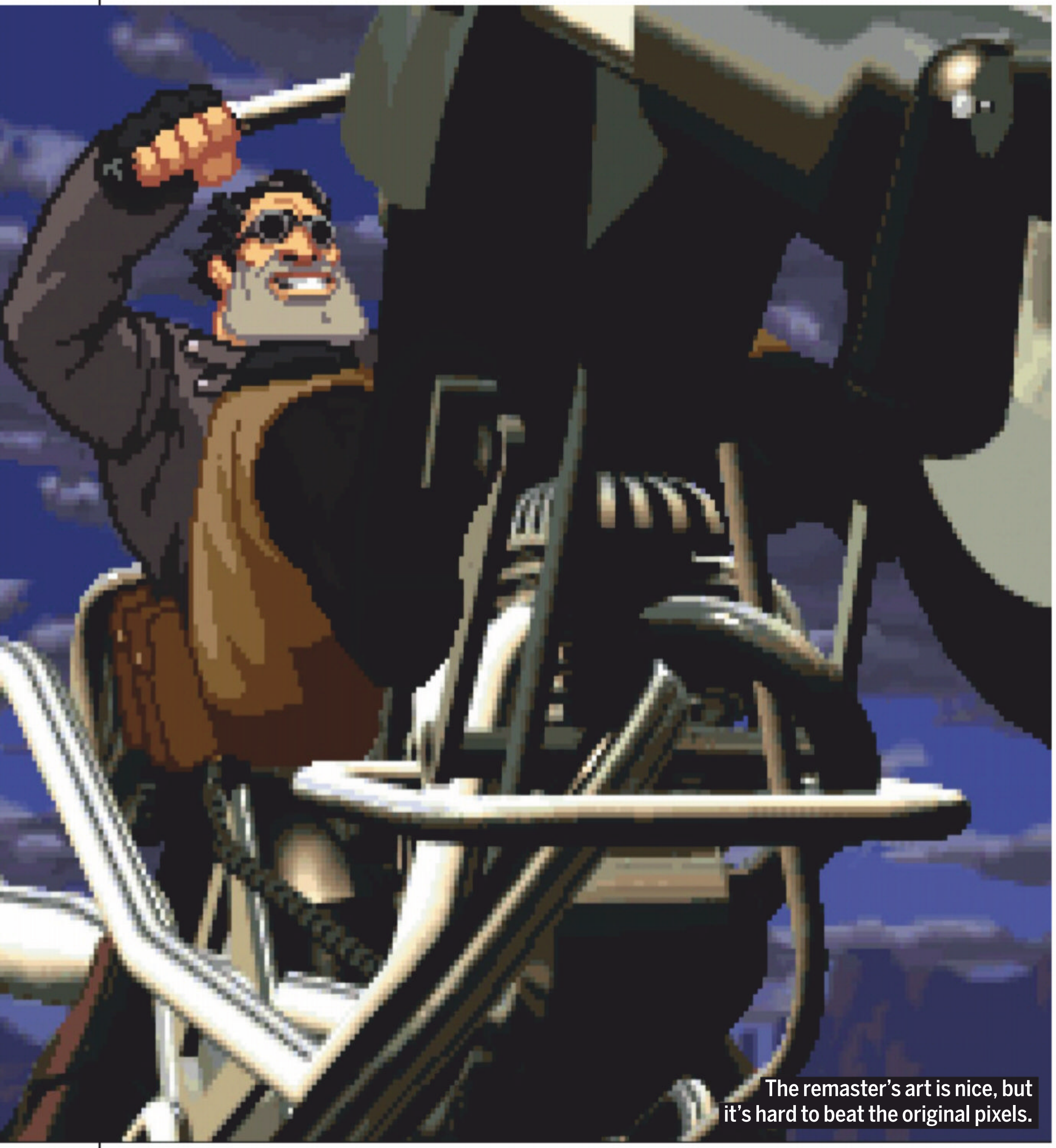
Ben is on the run for a murder he didn't commit, which is bad, but not as bad as the fact that Corley Motors – the last motorcycle manufacturer in the country – is ceasing production of its legendary bikes to mass produce minivans. And so our stubbly, leather-clad anti-hero embarks on a quest to clear his name and, more importantly, save his way of life from being destroyed by soulless corporate suits. *Full Throttle* is a game about freedom and authenticity, leaning into the romantic idea of an outlaw biker on the road, rather than the grim reality you might have read about in Hunter S Thompson's Hell's Angels. It's bikers as pirates, as wandering samurai, not the shady criminals that you'd usually see.

HOG WILD

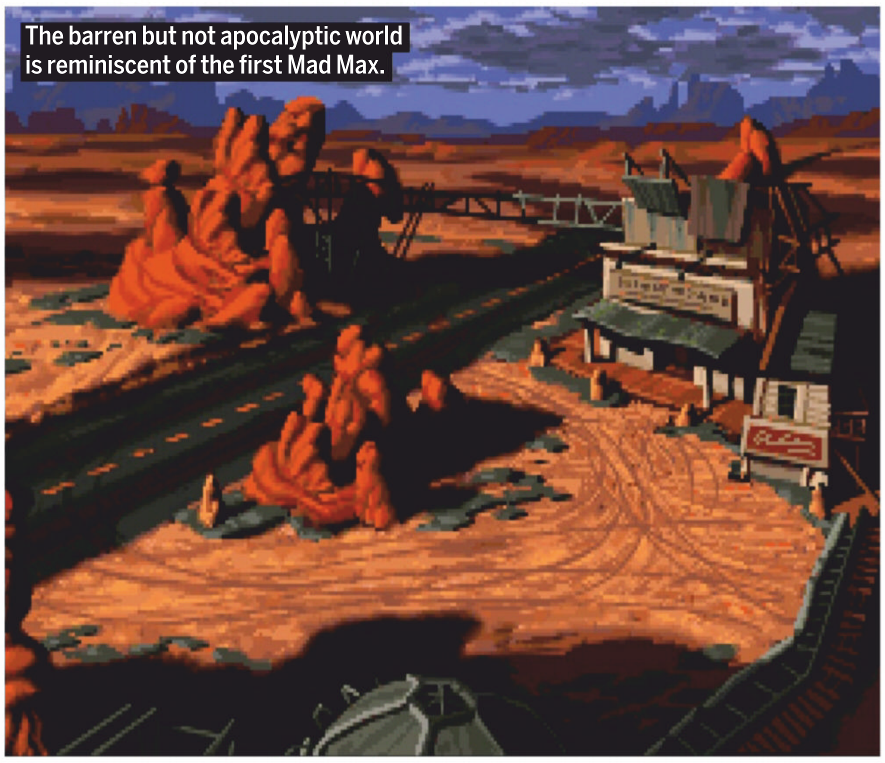
The Mad Max influence also extends to the setting. This is not a post-apocalyptic world, but it has the feel of one, with miles of barren desert highway, gangs hijacking trucks, and

NEED TO KNOW

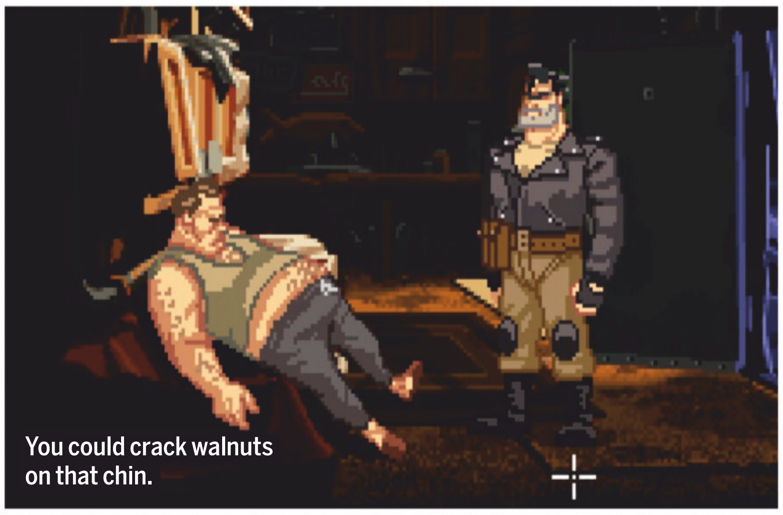
RELEASED 1995	**DEVELOPER** LucasArts
PUBLISHER In-house	**LINK** fullthrottle.doublefine.com



The remaster's art is nice, but it's hard to beat the original pixels.



The barren but not apocalyptic world is reminiscent of the first Mad Max.



You could crack walnuts on that chin.

mohawked bikers picking fights with each other just for the fun of it. *Full Throttle*'s desolate slice of the American West is a bleak, lawless, forgotten place, which makes it perfect for a nihilistic biker like Ben. The game also features some futuristic elements, including hover-cars, which adds a unique flavour to its aesthetic – but without it drifting into sci-fi territory. Artistically, this is one of LucasArts' most interesting games, and it remains a real treat to look at, even on a big, modern monitor.

But it wouldn't be anything without its cast. Tim Schafer is known for writing memorable characters, and *Full Throttle* is full of them. Ben is a great hero because he's a gravel-voiced hardass, but he also has a heart. The late Roy Conrad plays him perfectly, delivering his lines with a knowing, bone-dry humour. The supporting cast is great too, including villainous corporate stooge Ripburger, melancholy mechanic Mo, and treacherous trucker Emmet. This was one of the first videogames to cast mostly professional actors registered with the Screen Actors Guild, which is certainly reflected in the high quality of its voice acting.

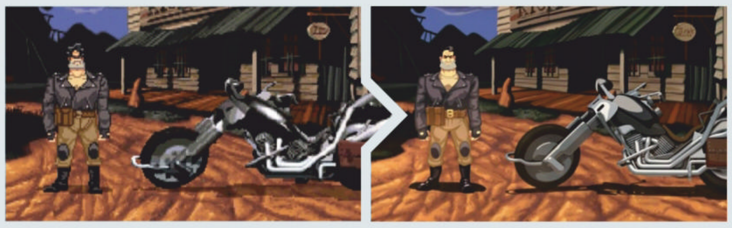
And you can't reminisce about *Full Throttle* without mentioning the music. The soundtrack is a huge part of its personality and enduring legacy, whether it's the atmospheric original score by longtime Tim Schafer collaborator Peter McConnell, or the fuzzy dive bar rock supplied by biker band The Gone Jackals. The use of their song Legacy in the opening titles is still one of the best uses of licensed music in a videogame, perfectly setting the tone for the adventure to come. Ben roaring along the highway to that guitar riff is about as good as it gets.

FULL ON

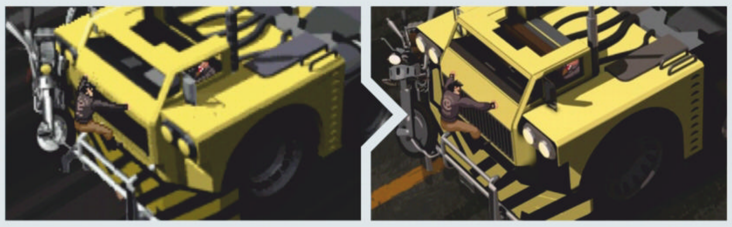
Compared to previous LucasArts adventures, *Full Throttle* is more streamlined and cinematic. Much of its three to five hour running time is made up of beautifully animated cutscenes, and the 'verb buffet' interface popularised by *Monkey Island* is replaced with a flaming skull that offers only a handful of ways to interact with the world – including Ben's favourites, the gloved fist and the leather boot. The idea behind

PAINT JOB

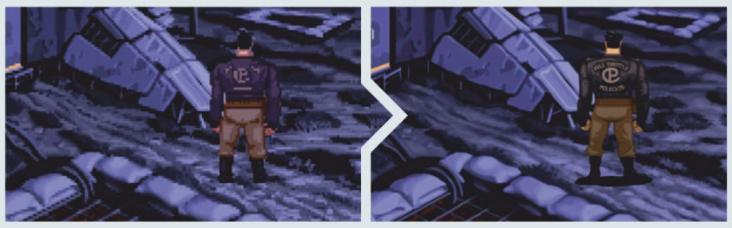
Original vs remastered visuals



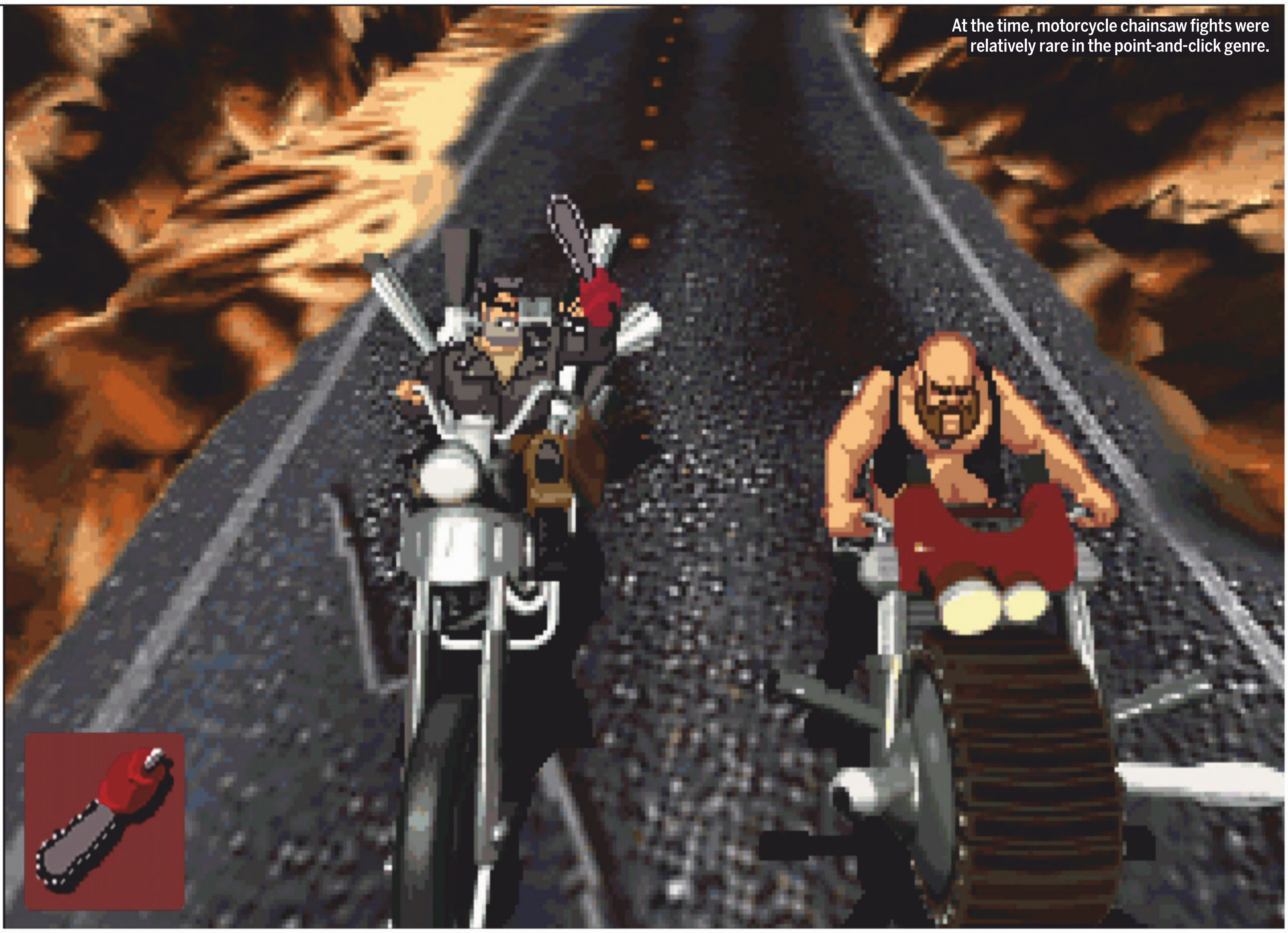
1 Double Fine and Shiny Shoe, who were contracted to help out with the remaster, repainted over 15,000 frames of animation.



2 Schafer says *Full Throttle* was much harder to remaster than *Day of the Tentacle*, which only had three fullscreen shots.



3 The remastered visuals stay true to the original aesthetic, but I prefer the nostalgia hit of the old pixel art.



At the time, motorcycle chainsaw fights were relatively rare in the point-and-click genre.

ITS PUZZLES FEEL LIKE A NATURAL FIT FOR A GAME ABOUT BADASS BIKERS

this, according to Schafer, was that constantly looking up and down to interact with stuff was distracting. The new interface also gave the artists more space to play with, with evocative backgrounds that cover the entire screen, rather than being obscured by the UI.

Full Throttle is also lighter on puzzles than most LucasArts adventures – and the puzzles it has are relatively straightforward, at least compared to the likes of *Day of the Tentacle*. What it's good at is making its puzzles feel like a natural fit for a game about badass bikers, hiding them in plain sight. A few hours into the game, Ben finds himself on a notorious desert back-road where riders from rival gangs meet up to fight. You have to figure out which weapons work against which bikers, clicking the mouse to furiously swing your chainsaw, plank of wood, or whatever you happen to be wielding. It has the feel of an action minigame, but it's really just an elaborately presented puzzle.

A side effect of this streamlined design is that *Full Throttle* is pretty short – as I say, it takes about three to five hours to finish. Over the years this has been cited by many as its biggest weakness, but I actually think it's a perfect length. Compared to the languid pace of most point-and-click adventures, this is a breakneck sprint through a series of thrilling set-pieces, with only short moments of downtime between them. And, really, that's what a game about this kind of character should be like. If Ben spent more time wandering around solving puzzles than tearing around on his hog, he wouldn't be much of a biker, would he?

REMASTER CLASS

There are a few ways to play *Full Throttle*. You can get the original DOS version, or use an emulator like DOSBox. But for the best experience, Double Fine's 2017 remaster is worth seeking out. You can play this with the original visuals, which I recommend, because as much effort clearly went into the remastered graphics, the original pixel art just looks better. But the best thing about this version is the uncompressed audio, taken from the original DAT recordings. As a fan who's played this game maybe 50 times over the years, it's a strange sensation hearing that classic dialogue – and that killer soundtrack – without a layer of compression fuzz. The remaster also comes with a load of concept art and a fun, insightful commentary track led by Tim Schafer.

Full Throttle endures because of its story, characters, and setting, not its puzzles. It's rarely held up as an example of great point-and-click adventure design, but in every other respect it's one of the finest – and most original – games LucasArts ever released. It also cemented Tim Schafer as someone with a knack for creating worlds that people love existing in, and characters they love hanging out with. LucasArts once threatened to release a third-person 3D sequel called *Hell on Wheels*, without the involvement of Schafer, but it was cancelled – and I'm glad. *Full Throttle* is a one-off, and its legacy should be left unspoiled. ■

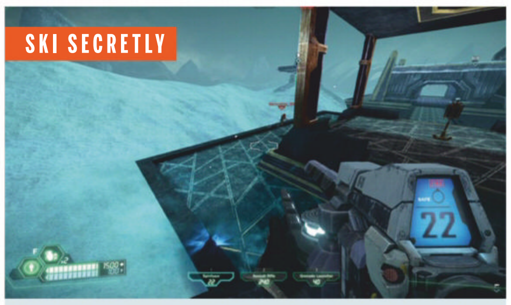
MUST PLAY

A PERSONAL LIST OF THE BEST GAMES YOU CAN PLAY RIGHT NOW

by Tyler Wilde

TYLER WILDE

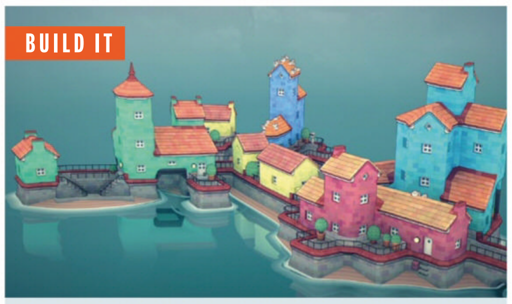
I finally beat the final, final boss in *Slay the Spire* the other day, and then I did it again just a couple of runs later. Something that once seemed unreachable now seems like no big deal. Guess I'll have to play other videogames again.



TRIBES ASCEND

bit.ly/3fwupRs

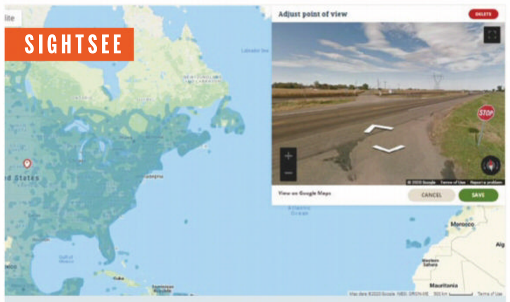
→ It'll never get another update and it's been hidden from Steam searches, but you can still download *Tribes Ascend*, log in with a Hi-Rez account, and join a server. Loyal fans lurk in its crypt-like menus, waiting for a game of capture the flag to materialise. Won't you join us in the twilight realm?



TOWNSCAPER

bit.ly/2C24K5n

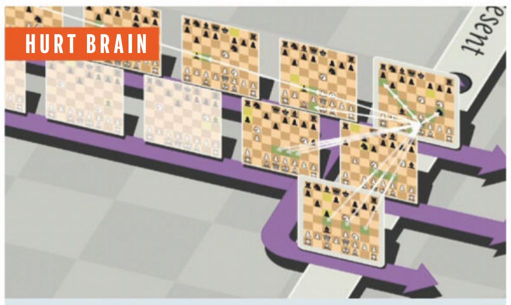
→ This is a neat town creation toy. You plop down paths and buildings in a world of water, clicking to make houses and towers in pastel hues that stack and merge into realistic formations as you go. Become engrossed by this world of breezes and arches and good feelings are guaranteed for at least an hour.



GEOGUESSR

geoguessr.com

→ The classic browser game is now a quarantine pastime. You're dropped into Google Street View somewhere in the world and have to figure out where. Play with family or stream your screen to friends with Discord Go Live (add your browser as a game in Discord's settings). It's kind of like leaving the house!



5D CHESS WITH MULTIVERSE TIME TRAVEL

bit.ly/3gyk7By

→ When a politician does something stupid, there's always someone who claims that we just don't understand the 5D chess game they're playing. Well, now I've played 5D chess, and let me tell you, it is a lot harder than looking like a complete asshole in a TV interview.

APE OUT

apeout.com

→ Before *Carrion*, the game where you're a monster escaping a science facility, there was *Ape Out*, the game where you're an ape escaping a science facility – and you get to splat scientists to the rhythms of jazz percussion, so you can feel cultured at the same time as you're punching people out of windows.

SLICE SOUNDS

BEAT SABER

beatsaber.com

→ This rhythm game is a really fun workout if you've got a VR headset and motion controllers. I played it every day for a while and I could tell it was on the verge of having an effect on my fitness. That's when I unplugged the Rift and went back to sitting down. My body is whatever the opposite of a temple is.

AUTOCORRECT

TIMELIE

timelie.urniquestudio.com

→ When you type this game into Google it's going to think you want to search for 'timeline'. No. It's called *Timelie*, and it's a nicely-made puzzle game. At least, that's what the Steam page quotes me as saying, "A nicely-made puzzle game." Sometimes that's enough. Play it on a lazy Sunday afternoon.

DOUBLE JUMP

ORI AND THE WILL OF THE WISPS

orithegame.com

→ Do what the wisps will you to: jump around for a dozen hours in the much bigger sequel to *Ori and the Blind Forest*. Exploring tangles of trees and icey mountain lakes is a good way to lose track of time, if you haven't already done that. Gets quite tricky towards the end though.

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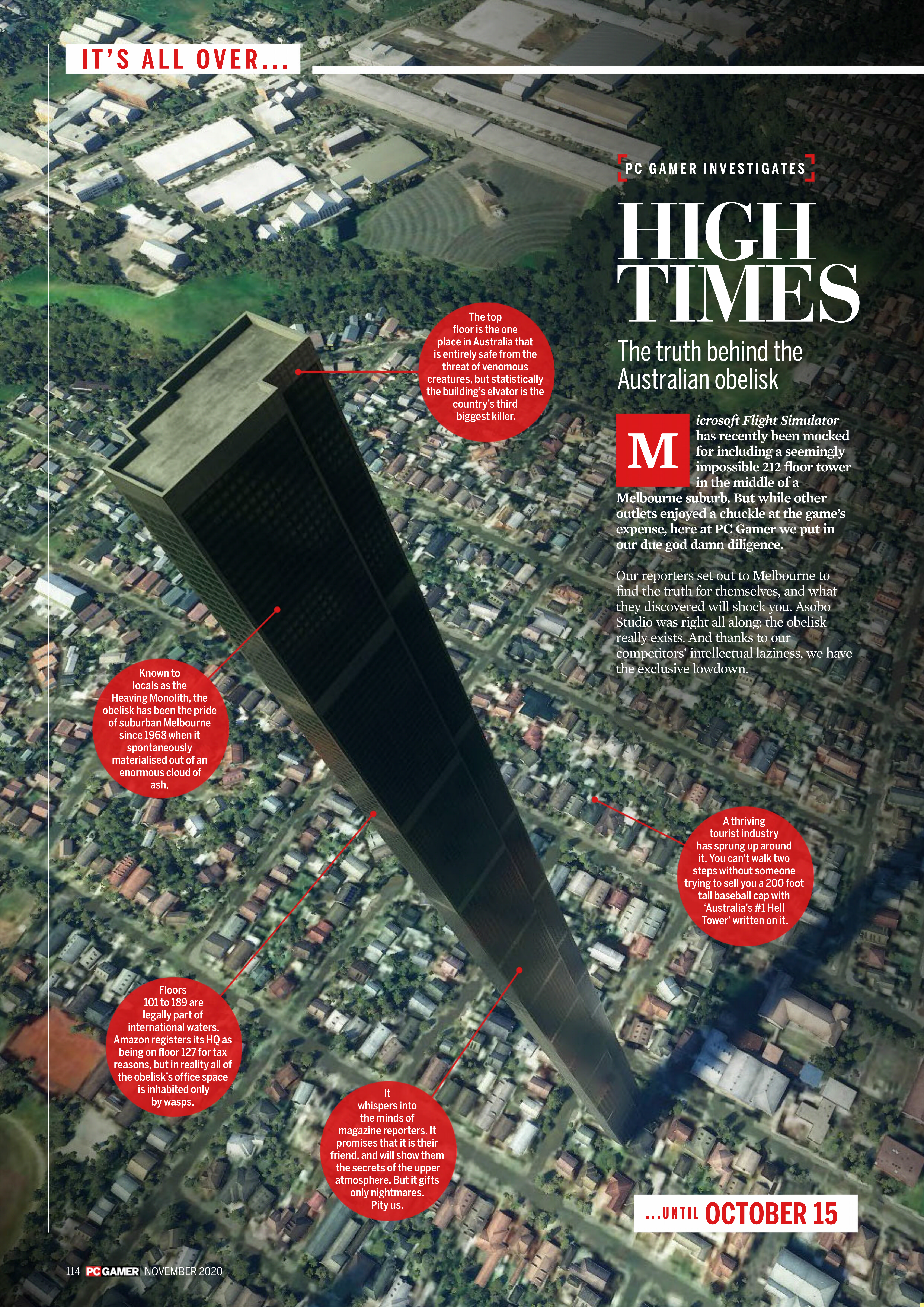
PC GAMER INVESTIGATES

HIGH TIMES

The truth behind the Australian obelisk

Microsoft Flight Simulator has recently been mocked for including a seemingly impossible 212 floor tower in the middle of a Melbourne suburb. But while other outlets enjoyed a chuckle at the game's expense, here at PC Gamer we put in our due god damn diligence.

Our reporters set out to Melbourne to find the truth for themselves, and what they discovered will shock you. Asobo Studio was right all along: the obelisk really exists. And thanks to our competitors' intellectual laziness, we have the exclusive lowdown.



The top floor is the one place in Australia that is entirely safe from the threat of venomous creatures, but statistically the building's elvator is the country's third biggest killer.

Known to locals as the Heaving Monolith, the obelisk has been the pride of suburban Melbourne since 1968 when it spontaneously materialised out of an enormous cloud of ash.

A thriving tourist industry has sprung up around it. You can't walk two steps without someone trying to sell you a 200 foot tall baseball cap with 'Australia's #1 Hell Tower' written on it.

Floors 101 to 189 are legally part of international waters. Amazon registers its HQ as being on floor 127 for tax reasons, but in reality all of the obelisk's office space is inhabited only by wasps.

It whispers into the minds of magazine reporters. It promises that it is their friend, and will show them the secrets of the upper atmosphere. But it gifts only nightmares. Pity us.

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